STAFFORDSHIRE
UNIVERSITY

GradEX2014

21 May Stoke-on-Trent, and 23 May Stafford

Welcome to
GradEX 2014!

It is our great pleasure to welcome you all to GradEX, our annual exhibition of project work undertaken by final year students at Staffordshire University. This year is the biggest ever event with students from the Faculty of Computing, Engineering and Sciences and students from the Faculty of Arts and Creative Technologies showcasing their work. In addition, the School of Engineering moved from Stafford last September and this year's GradEX marks the end of its successful first year in Stoke. You can find our Engineering students based in fantastic new facilities at the Stoke campus, with our Science students in the Science Building. As in previous years our Entertainment Technology students (Games, Film, Music) and Computing students will be exhibiting their work on the Stafford campus.

The purpose of the exhibition is to allow our students to showcase their work to prospective employers, the public, friends, family, and colleagues, and it has become a well-established event in the University's calendar. GradEX offers our students a chance to explain their work to others and as such it plays an important and formative role in their development. Key to GradEX's success is the involvement of employers and every year the personal interactions that take place between our students and key industry figures result in genuine job offers and career opportunities.

GradEX 2014 is sponsored by a range of employers and professional organisations. We are very grateful for their support as not only does it serve as a mark of recognition for the work of our students, but it also adds significant value and esteem to the event.

Thank you for taking the time to visit. We are very proud of our students and GradEX provides an excellent opportunity to celebrate their achievements. We both hope that you can share in this celebration and that you enjoy your day with us at Staffordshire University.

Best wishes,
Doctor Astrid Herhoffer PhD, MA
Dean of Arts & Creative Technologies
Professor Hastings McKenzie EngD, CEng, MIMechE
Dean of Computing, Engineering and Sciences

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Contents

IET The Institution of Engineering and Technology

Sponsored by the A. C. H. Crisford Charitable Foundation
Andrew Crisford is a Computing graduate from
Staffordshire University

Automotive

James Barrett

BSc(Hons) Motorsport Technology

Scale Bentley Model Aerodynamic Comparisons

The purpose of this project is to find out if a scale model of a car gives accurate aerodynamic results when put into a CFD wind tunnel. This project will use a 1/4 scale model of a Bentley Continental provided by the university that has been reverse engineered and the CAD model has been put into a CFD wind tunnel.

Joseph Chomczuk

BSc(Hons) Automotive Technology

Motorsport Seat Mount Design

Investigation into the design of motorsport seat mounting equipment. In depth research into existing designs. Development of a new high performing design along with design stages, testing and manufacture.
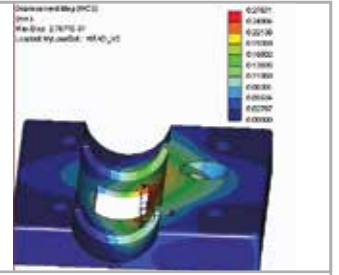

Tak Chiu

BSc(Hons) Aeronautical Technology

Prototype Aircraft Design and Analysis

6th Generation Aircraft Design Analysis.

Benjamin Crooks

BEng(Hons) Automotive Engineering

Improving the Efficiency of a SEM Diesel Engine

This project focuses on improving the cylinder head design of a Yanmar L48-AE single cylinder diesel engine via the use of a rotary valve solution to improve the volumetric and mechanical efficiency within the Shell Eco-Marathon Prototype ruling framework.
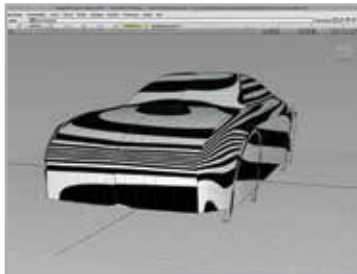

Delwyn Gibbon

BSc(Hons) Automotive Technology

Effects of Modifying a Vehicle for Aerodynamic Performance

This project entails the construction, testing and modification of a current vehicle out in the market. The project outcome is to improve the aerodynamic performance of the vehicle by upgrading the "bodywork" in stages. Comparing these results improvements will be located and where necessary locations for alterations.
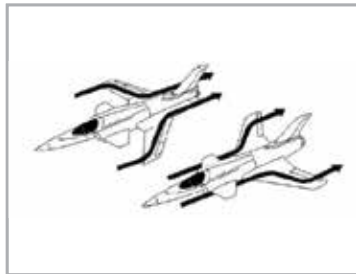
Paras Gurung

BSc(Hons) Aeronautical Technology

Concept of Forward Swept Wings on Boeing 767-300

This project will look into the possibility of fitting Forward Swept Wings on Boeing 767-300 series for more efficiency and make the aircraft more functional. FSW configuration provides better lift to drag ratio than aft swept wing and is usable at higher angle of attack.

Maxim Harris-Jones

BSc(Hons) Motorsport Technology

Use of Materials in Vehicle Design and Safety Improvements

Industry knowledge has made significant strides in the field of materials development. This project aims to test, analyse and report on the use of various materials in vehicle design and safety improvements and determine whether or not the best material is being utilised.
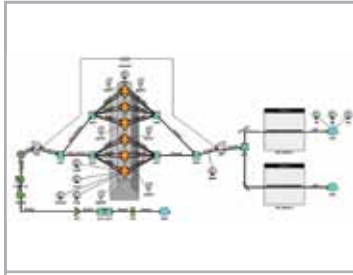

Stuart Hurrell

BEng(Hons) Automotive Engineering

Design of a Formula Student Racing Car

This project will tackle the design elements of creating a vehicle to compete in the Formula Student event. The vehicle will be designed in 3 dimensions and tested for suitability in a number of key areas required for optimum performance when racing.
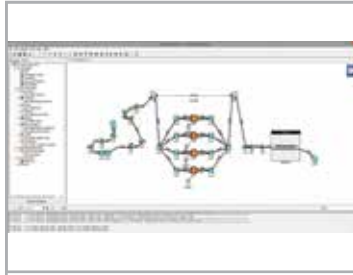
Automotive

Samuel Irons

BEng(Hons) Automotive Engineering

Theoretical Comparison of Diesel & CNG as a HGV Fuel

This project aims to compare compressed natural gas to diesel in terms of performance, emissions and economic viability, as a fuel source for HGV's. The project will be research and computer analysis driven using Ricardo Wave (engine simulation software).
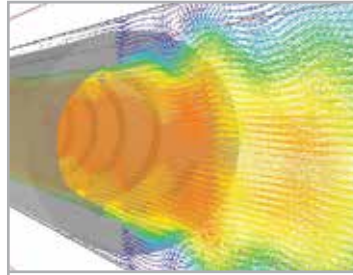

Alexander Lane

BEng(Hons) Automotive Engineering

Investigation into Various Fuel Types and Engine Performance

This project will be investigating some of the different types and grades of fuels available for use with internal combustion engines. It will include testing of the fuels by means of software simulation in the Ricardo Wave engine CFD package.

Jake Lindsey-Dean

BSc(Hons) Automotive Technology

Internally Spiralled Inlets for Engine Performance

This project is to show the importance of swirl with regards to naturally aspirated engine performance. Along with this designs and appropriate CFD testing of a simple inlet manifold featuring designs of a spiral insert to achieve swirling motion of incoming flow into an engine.

George Martin

BSc(Hons) Motorsport Technology

Aerodynamics to Power Turbines in the Motorsport Industry

The aim is to design a racing car which, once it has started off the grid, the speed of the air flowing over the vehicle will in turn charge a battery to make the electrical motors run.

Sam McDonald

BSc(Hons) Mechanical Engineering

DeltaWing Car Comparison to LMP Racer and its Applications

The Delta Wing racing car that was entered as the garage 56 entry at LeMans in 2012, this car was revolutionary in race car design and this project looks at the technology used in the car and the applications they have and how the Delta wing produces similar levels of down force compared to the current LMP2 prototypes.

Lewis Porto

BEng(Hons) Automotive Engineering

Improving the Handling of an Alfa Romeo 156 Rallycross Car

This project looks into improving the handling of an Alfa Romeo 156 rallycross car. The main ideas explored in this project are looking at aerodynamic devices for example spoilers and diffusers. These devices are tested virtually and then built. These are then applied to the vehicle and tested physically.

David Rushmer

BSc(Hons) Motorsport Technology

A Comparison of Air Manipulation

A comparison of Air Manipulation between open and closed wheeled systems aims to establish which of the two chassis types is best suited in regards to how air is moved by the vehicle to reach key areas.


Nathan Saggers

BSc(Hons) Automotive Technology

Investigating Suspension Design and Movement Characteristics

A professional and detailed project investigating the design and implementation of suspension systems in regards to suspension movement and the resulting characteristics, focusing mainly upon camber intake and the compromises involved with optimising road vehicle suspension systems.

Automotive

Stoke 21st May
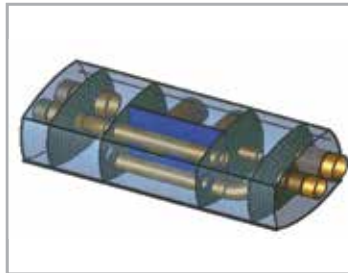
David Smith

BEng(Hons) Automotive Engineering

w: http://www.linkedin.com/pub/david-smith/86/b21/b47

W12 to V6 Acoustic Changes during Cylinder Deactivation

This project looks at methods designed to minimise the acoustic changes heard when a W12 gasoline engine utilises cylinder deactivation to run more efficiently as a V6. It investigates fundamentals of acoustics and the technology behind cylinder deactivation.

Benjamin Straw

BEng(Hons) Automotive Engineering

Analysis into Technology Surrounding Bolted Joint Problems

In a production environment the application of appropriate force, load & retention into a joint is critical. Assembly of components with incorrect loads could inflict performance & safety. This project utilises several major technologies on a predefined joint and analyses the findings to conclude the most appropriate.

Liam Stubbs

BEng(Hons) Automotive Engineering

Effects of Piston Bowl Geometries on Combustion in a CI ICE

An investigation into the effects of various piston bowls on the combustion within a Compression Ignition (CI) Internal Combustion Engine (ICE), primarily focusing on how to the geometry influences fuel and air mixture and how this affects NOx and Soot Formation levels during combustion.
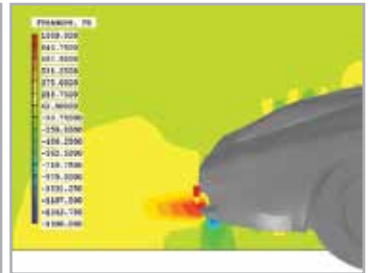
Edward Thomason

BSc(Hons) Automotive Technology

Improving the Range of a Nissan Leaf by Decreasing the Drag

Electric cars are becoming more popular as we go through the 21st century, but the range of electric cars means they have limited use. The Nissan Leaf has a drag coefficient of 0.28 and a range of 124 miles at 38 miles per hour. But what happens if the drag coefficient is reduced by improving the frontal aerodynamics?

Biological Science

Stoke 21st May

Mariane Akinsanmi

BSc(Hons) Human Biology

Coloured Lights and the Effects on the Human Physiology

Colours are part of a daily occurrence in everyday life, however is there a much deeper influence colours have in the decision we make, our behaviour, and possibly even our physiological responses. This research involved the use of coloured lighting to investigate to an extent, how much colour can affect people.

Misbah Baig

BSc(Hons) Biology

The Effect of Ampicillin on the Growth of *Pisum Sativum*

This project was carried out to investigate whether antibiotic drugs can affect the growth of a plant, and to examine whether the antibiotic simply destroys the harmful bacteria or the beneficial bacteria, or even both types of bacteria.

Thomas Bateman-Price

BSc(Hons) Biochemistry and Microbiology

Exogenous Coenzyme Q10 on Cellular Oxidative Stress

Coenzyme Q10 (CoQ10) has been indicated as an antioxidant for clinical use, while others have noted a neutral or prooxidant effect. By exposing isolated mitochondria to peroxyl radicals, a model of cellular oxidative stress is simulated with effects of supplemented CoQ10 ascertained via malondialdehyde production.

Samantha Bloor

BSc(Hons) Biomedical Science

Equine Strangles: Phage Assays and Genetic Investigation

Potential use of bacteriophages in the lysis of Streptococcus equi. Incorporating a phage plaque assay, testing equine faeces samples, and a lysogeny assay, investigating the expression of phages via UV activation. Finally, a PCR study is incorporated, with primers designed to Strep equi and the C1 streptococcal phage.
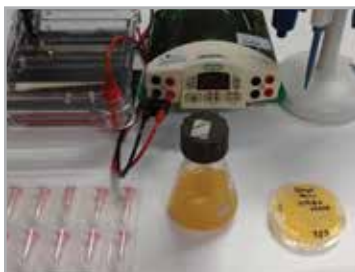

Emma Bone

BSc(Hons) Biology

Maths and the Brain

The aim of this project is to study the effect of maths stress on the electrical activity of the brain using an EEG. Participants start in a relaxed state and are then asked a series of mathematical questions with increasing complexity (linked to Key Stage Maths) to see if this stress causes any changes in the EEG.

Nathan Chaffer-Malam

BSc(Hons) Biochemistry and Microbiology

MRSA and *mecA* Expression, Aerobically and Anaerobically.

MRSA is a nosocomial infection which effects people world-wide. MRSA expresses the resistance gene, *mecA*, causing the effects of methicillin on the peptidoglycan to become ineffective. By examining *mecA* expression, under aerobic and anaerobic environments, greater understanding of this resistance may be possible.

Kathryn Challis

BSc(Hons) Biology

How Does My Sleep Affect My Grades?

A study looking at the relationship between the level of variation in undergraduate sleep patterns and the grades achieved, with an aim of discovering whether those with constant sleep patterns perform better in coursework and exams compared to those with erratic patterns.

Andrew Finney

BSc(Hons) Biomedical Science

Anastrazole and Vitamin D3 Combination in Vitro using MCF7

Using cell culture to investigate the anti-proliferative effects of chemotherapeutic drug Anastrazole and the hormonally active form of vitamin D known as Calcitrol or 1a,25 dihydroxyvitamin D3. It was found that action of anastrazole was interrupted by treatments of vitamin D3.

Biological Science

Stoke 21st May

Preeya Jankee

BSc(Hons) Biology

Yakult - "Proven to reach the gut alive" Fact or Fiction?

Can probiotics withstand the hostility of the stomach? Yakult claims its good bacteria *Lactobacillus casei* Shirota reaches the gut alive, is this true? An in vitro study determined the survivability and viability of *L. casei* Shirota after exposure to artificial gastric juice.

Alexander Michael Jones

BSc(Hons) Biochemistry and Microbiology

Antibiotic Resistance Acquisition: Effects Bacterial Growth

Development of streptomycin resistance in *Escherichia coli, Salmonella spp* and *Mycobacterium smegmatis.* Effect of growth rate on solid and broth medium was analysed. Results used to argue: i) the higher the dose of streptomycin the slower the growth rate ii) resistance acquisition can occur at sub-lethal concentrations.

Gagandeep Mann

BSc(Hons) Biology

How Does Varied Exercise Affect your Immune System?

The aims of this research would be to look at how IgA secretion levels would be affected at the varied intensities of exercise with particular consideration for the moderate and high intensity, with a VO2 Max test being done prior to the run to calculate the appropriate intensity.
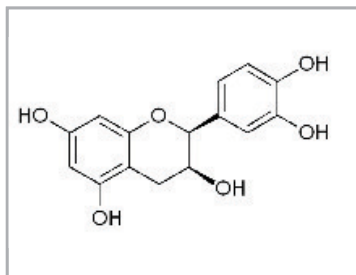

Jordane Marsh

BSc(Hons) Biology

Onion Saves the World Again!

Many sources have said that feeding a cold is important, but what do you feed a cold? A large portion of folk law medicines take common ingredients such as *allium cepa*, the onion, and encouraged application of a varied range of poultices, soups and teas to treat mild infections of strep throat and impetigo.

Samantha McKeand

BSc(Hons) Biochemistry and Microbiology

Cardiovascular Disease Vs Flavonoids

Is dark chocolate beneficial to our health? Dietary flavonoids, epicatechin and catechin, found in cocoa, have the potential to inhibit an enzyme, 5' lipoxygenase, within the body. Otherwise this enzyme helps catalyse a cascade of reactions to ultimately produce atherosclerosis, and therefore cardiovascular diseases.

Ashay Patel

BSc(Hons) Biology

Should Caffeine be a Banned Substance in Sporting Events?

The project investigates the effect of caffeine on physical performance and to see if caffeine might produce a difference in a timed cycling sprint. To determine the levels of caffeine utilised during cycling an individual's urine will be analysed using a HPLC system (High Pressure Liquid Chromatography).

Leena Patel

BSc(Hons) Biology

Effect of Blueberry Consumption on Post Prandial Glycaemia

A comparison of the effects of whole blueberries, anthocyanins and fibre on the ability to regulate postprandial glycaemia in human subjects.

Joshua Petch

BSc(Hons) Biomedical Science

Mutating Bioluminescence

The Lux Operon is a series of genes which encodes for bioluminescence. It is derived from the marine organism *Vibrio fischeri*, a symbiont of the Hawaiian Bobtail Squid Euprymna scolopes. Using a mutagenic PCR protocol I shall induce random mutations in the regulatory gene, Lux R, and observe the effect on expression.

Biological Science

Jonathan Piper

BSc(Hons) Human Biology

Impact of Vitamin D on Muscular and Functional Performance

Hypovitaminosis D, regarded as a worldwide pandemic, induces symptoms such as bone fragility and muscular atrophy. Therefore the present study aims to accurately ascertain the effects of vitamin D supplementation on young adult serum total 25[OH]D, functional performance and isokinetic leg strength.

Jazsmine Stroulger

BSc(Hons) Biology

A Tomato a Day, Keeps Cancer Away!?

Could ketchup help prevent cancer? Lycopene is a red carotenoid pigment found in tomatoes and its food products. This anti-oxidant has been found to prevent prostate cancer. How much lycopene is in these processed tomato products? Is it present in a sufficient amount to have the desired impact?

Claire Turner

BSc(Hons) Biology

Incy Wincy

Spiders may not be man's best friend but from an ecological standpoint they still deserve more of our attention than they currently gain. Indicating the health of a habitat, predating our unwanted pests and providing food as prey, for mammals that we value, spiders are of a greater value to us than many first think.

Biomedical Sciences

Stoke 21st May

Haseeb Aziz

BSc(Hons) Biomedical Science

Cranberry Juice Antioxidants on Lipid Peroxidation

As it is well documented, smoking can increase the chances of developing cancers and heart diseases through damage caused by free radicals. It is thought that drinking cranberry juice, a super food product, the antioxidant properties could lower the damage caused by smoking and thus lower the risk of disease.

Rebecca Blann

BSc(Hons) Biomedical Science

Does Exercise Have an Effect on Alpha Brain Waves?

Everyday we hear about people claiming to exercise to reduce stress or to clear their minds. This experiment is designed to see, using an electroencephalography (EEG), what type of brain activity occurs while participants undertake exercise compared to at a resting state, and whether or not exercise can reduce stress.

Anita Dawit

BSc(Hons) Biomedical Science

Is Consuming Dark Chocolate Beneficial to Serum Cholesterol?

Cardiovascular disease is the leading cause of death worldwide. This study investigates if consuming 70% cocoa chocolate daily for three weeks has any effect on total cholesterol, HDL cholesterol and triglycerides on the male gender.

Kenneth Ekem

BSc(Hons) Biomedical Science

Effect of Exercise on Mood Perception

In this investigation the effect of moderate intensity exercise on the mood perception of participants will be tested. Mood perception will be quantified using a Profile of Mood States (POMS) questionnaire which is undertaken by participants before and after the period of exercise.

Catherine Evans

BSc(Hons) Biomedical Science

Does a Diet High in CHO Affect IgA in Response to Stress?

During stressful periods the IgA level in saliva has been found to decrease. Cortisol can affect the carbohydrate metabolism and during stressful periods cortisol is raised. The aim of this project is to see if a diet high in carbohydrate has any effect on IgA level after a stressful event.

Kinga Gradiz

BSc(Hons) Biomedical Science

Diet: The Fight with Cancer

This research investigates the effects of changes in magnesium and calcium intake on development and progression of cancer.


Arita Kastrati

BSc(Hons) Biomedical Science

Combination Therapy; a New Approach to Acne Vulgaris?

With over thousands of products, both prescription and over the counter, cycling in and out of shelves it's needless to say how important the treatment of acne is. However with the new approach of combination therapy becoming more popular, this project aims to conclude whether it is more effective than monotherapy.
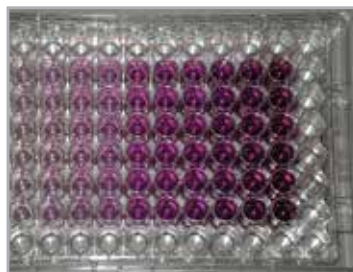
Samantha Keenan

BSc(Hons) Biomedical Science

Flavonoid Effects upon Pre-Adipocyte Proliferation

The ability to reduce pre-adipocyte proliferation before the cells can mature could reduce an individual's potential to gain weight through fat storing. The flavonoid Quercetin, as a known synergistic chemical to anti-cancer drugs, may provide such an anti-proliferative effect.
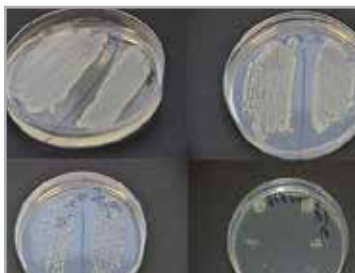
Biomedical Sciences

Stoke 21st May

Winner Lawal

BSc(Hons) Biomedical Science

Aerobic Interval Exercise Vs Continuous Moderate Exercise

This project puts to test the two most common and universally practised forms of exercise. It tests three stress parameters, mental, physical and oxidative. The aim is to bring some science back to exercise and formulate exercise regimes based on scientific facts, therefore achieving good, sustainable results.

Philip Martin

BSc(Hons) Biomedical Science

Variation in the Bactericidal Effect of Alcohol

The aim of this investigation was to determine the type of alcohol and alcohol concentration that should be used in order to achieve destruction of specific species of pathogenic bacteria. There are indications of a difference in resistance to alcohols between gram positive and negative organisms.

Anna McAteer

BSc(Hons) Biomedical Science

Coffee - Stimulant or Sedative?

Many of us rely on coffee to give us that little push in the mornings, but is it really making the difference we expect? Coffee contains both caffeine and chlorogenic acid, two components said to have a antagonistic effect on each other. My project looks into the effect of both these chemicals on plasma glucose levels.

Katrina Muruganinrajah

BSc(Hons) Biomedical Science

Varying Intensity of Exercise on Free Radical Production

The aim of the project is to investigate the effect of varying intensity of exercise upon the rate in which free radicals are produced. Free radicals, in large quantities, can have hazardous effects upon the body. This study is conducted on hockey players, who undertake regular moderate to high intensity exercise.
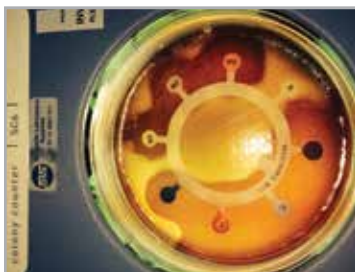
Zoraiz Mushtaq

BSc(Hons) Biomedical Science

Synergistic Effects of Oxacillin and Natural Herbs upon MRSA

I'll be researching into how the antibiotic, Oxacillin, can be used in different combinations with the herbs Curcumin and Oregano at various concentrations to show the possible synergistic effects against the highly mutagenic bacteria MRSA.

Elisha Saunders

BSc(Hons) Biomedical Science

Potential Treatments of 'Flesh Eating Bacteria'

The project analyses the effect of antibiotic resistance on the treatment of *Streptococcus pyogenes* a cause of potentially deadly infection in humans. It also aims to identify potential alternative treatments to the bacterial infection including: Echinacea, manuka honey and garlic oil.

Jessica Smith

BSc(Hons) Biomedical Science

The Effect of Fruit Juice on Blood Coagulation Time

Previous research has shown that certain fruit juices have inhibited platelet aggregation which is a step in the coagulation cascade (formation of a blood clot). This project is designed to test the total antioxidant capacity of four different fruit juices and their effect on blood coagulation time in humans.

Harrinder Virk

BSc(Hons) Biomedical Science

The Effects of Nicotine on Plasma Blood Glucose

According to the NHS, around 100,000 people die each year in the UK from tobacco smoking and smoking-related illnesses. The project investigates whether nicotine in cigarettes effects blood glucose levels in smokers compared to non-smokers and if nicotine patches used to help smokers stop smoking can also raise levels.
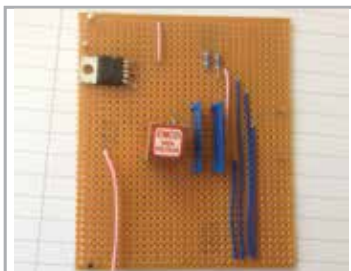
Ifeolu Adeyemi

BEng(Hons) Mechanical Engineering

Carbon Capture

An in depth look at CCS (Carbon Capture and Storage) which is a potentially great technology that could reduce carbon emissions by up to 90%. This project will look into the processes and how beneficial this technology could be while comparing the negatives.

Arosh Ali

BEng(Hons) Robotics Engineering

Electro-active Artificial Muscle

A new form of actuation, the project is based on the use of Smart Materials with an electrical stimulus. The materials that are used and tested will have actuation properties and will be considered if they have similar or better properties of biological muscles.

Alexander Ball

BSc(Hons) Product Design Technology

The Development of a Canoe Sprint Racing Training Aide

Technology is becoming more popular within sports training for to athletes. This project looks into the application of technology in the training of athletes for Canoe Sprint Racing by developing a training aide to allow athletes to improve technique and fitness while tracking their performance on the water.

Richard Bartholomew

BEng(Hons) Mechatronics

Ladder Climbing Robot

The key aim of this project is to research and develop the idea of building a robot capable of successfully climbing a vertical ladder without any remote assistance.

Benjamin Bond

BSc(Hons) Aeronautical Technology

Blended Wing Body Concept for Passenger Transport Role

A concept design for a blended wing body aircraft and its cabin aimed at the passenger transport market.
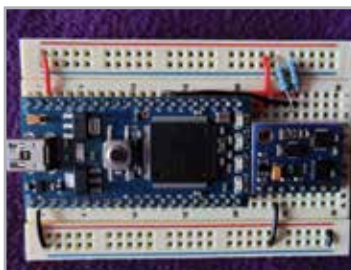
Daniel Brant

BEng(Hons) Robotics Engineering

Cartesian Locator via Inertial Navigation

The Cartesian Locator uses accelerometers and gyroscopes connected to a microcontroller to determine distance travelled in X, Y and Z. This is to be used as an alternative to GPS, where GPS is not practical or useful; such as indoors, underwater or for accuracy greater than 2 metres.

Luke Brown

BSc(Hons) Product Design Technology

Developing Consumer Products with Increased Longevity

We live in a society where we, the consumers, seek to own the latest and greatest products, often upgrading from an existing one which is still fully functional. This study investigates that concept to find a solution to wasteful spending and ultimately develop a long-lasting product.
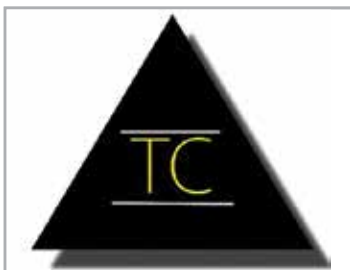
Thomas Carmichael

BSc(Hons) Product Design Technology

www.tomcarmichael.co.uk

In Game Feedback for Sports Equipment and Headgear

This project looks to design a sports product that utilises many technologies such as head up displays and GPS tracking to provide the user with instant in-game feedback.

Samuel Carroll

BEng(Hons) Mechanical Engineering

An Investigation into Decoupling Mechanisms on Road Bikes

This project looks into the decoupling mechanisms that have been fitted onto high performance road bicycles, mainly looking at how well the systems filter out the frequencies of vibration that can be harmful to the body over long periods of exposure such as a typical stage in a professional bike race.

Javier Jesus Collado Gutierrez

BEng(Hons) Mechatronics Engineering

www.javiercollado.es

Design of a 3D Printer

The present project consists of the design of a three dimensional (3D) printer based on Fused Filament Fabrication (FFF) technology.

Jack Cunnington

BEng(Hons) Product Design Engineering

www.jackcunningtondesigns.weebly.com

The Incorporation of Smart Materials into Security Devices

This project is aimed to investigate different types of smart materials and how they can be integrated into security devices with the main criteria being to improve functionality and user interface but also to add more security to the system. With a particular focus on pressure dependant materials as sensors.

Daniel D'Adamo

BSc(Hons) Aeronautical Technology

Search and Rescue UAV Deployment Rocket

This project is a coastal based rocket that is designed to deploy an inflatable UAV out to sea at an altitude of 353.7 metres (1 160.4 feet). The rocket is intended for use in search and rescue, small and compact it is light enough to be assembled then launched by a single user.

Jonathan Davies

BSc(Hons) Aeronautical Technology

Flight Data Recorder iPhone Application

The iPhone application provides a platform for recording all aspects of an aircraft's flight. The possible uses for this include: training analysis and feedback, aircraft monitoring and maintenance and to preserve flight data in the event of a crash.

Matthew Davies

BSc(Hons) Product Design Technology

Revitalising the High-Street Using Technology

Britain's high-street has been in considerable decline over the past few years, and it doesn't seem to be slowing down. This project will research the pitfalls of current high streets and discuss how the use of technology can be integrated to revitalise the high-street.

Michael Dixon

BSc(Hons) Aeronautical Technology

Airbus A400M European Gunship Concept

This project focuses on the conversion of the Airbus A400M 'Atlas' military transport aircraft for use as a fixed wing gunship by European powers such as Britain, France and Germany, and includes a detailed 3D visualisation of the finished Gunship concept.
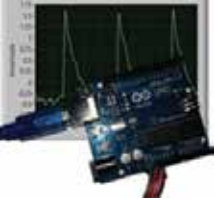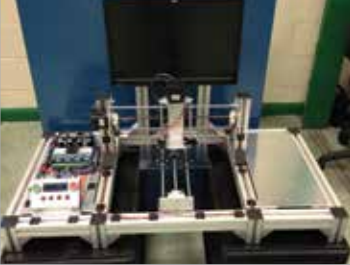

Ashley Alexander Dunn

BEng(Hons) Robotics Engineering

Independent Living Aid

The project is about designing a new egg cracker for those with arthritis who can use this device. Also to give the best result in breaking the egg and minimal egg shell falling into mixture.

Engineering and Design

IET The Institution of Engineering and Technology

Daniel Durnall

BSc(Hons) Robotics Technology

Use of Kinect for Rehabilitation after Knee Surgery

Design a user interface and choose suitable hardware for use in patients' homes.

Philip Else

BEng(Hons) Robotics Engineering

Feasibility Study of Using Biological Signals in Robotics

This project was an investigation into the feasibility of integrating biological signal processing into robotic systems. This project has mainly focused on Electromyographic (EMG) signal sampling, and looking into ways of using these signals to control physical objects often used within robotics.

Fiona Farrington

BEng(Hons) Mechanical Engineering

Biomechanically Designed Functional Knee Brace

This project is a feasibility study into the design of a functional knee brace based on the biomechanics of the human knee. A model of the knee was created using CAD and mathematics. The effect of different aspects of knee brace design on these mechanics was analysed, and the results were used to design a knee brace.

Ademola Gbadebo

BEng(Hons) Mechanical Engineering

The Potential for Renewable Energy to be Self-Sufficient

The project investigates the current renewable sources available in today's world and assesses the benefits and pitfalls of each. In addition the potential for each renewable to be self-sufficient is appraised which presents the possibilities for renewable energy to be a stand-alone energy source.

Mathew Gibson

BSc(Hons) Robotics Technology

Interfacing Micro-controller and PC to Control a Robot

The construction and programming of a test board containing a PIC 18f4550 micro-controller such that it can interface with a PC via USB to run a simple program generated by a child. This aims to assist the child in learning the basic methods of programming by giving them a much more visceral learning experience.

Peter Hall

FD Electrical and Electronic Technology

CNC Machine

DIY CNC machine - which programmed cuts material in the design that is sent to it over a serial connection, using a mixture of resources and aspects to make it work, including serial, arduino, and manual gamepad control. LCD's and monitors to monitor states of each component.

Thomas Hammond

BEng(Hons) Robotics Engineering

Learning Basic Programming & Robotics Using a Robot

The creation of a tutorial and library that will teach the user the basics of programming and robotics using a robot, also to motivate and generate interest in the subjects. The simplified library functions are to ease the learning curve and motivate people by showing their programs can make the robot achieve.

Nathan Handley

BSc(Hons) Aeronautical Technology

An Investigation into Various Shapes of Spiroid Winglets

The aim of the project is to investigate the performance and aerodynamically evaluate different shapes and cross-sectional profiles of spiroid winglets. By accumulating data, an understanding into different advantageous features can be used to enhance future designs.

Thomas Heath

BSc(Hons) Product Design Technology

Improve Income within Charities Using Modern Technology

The concept that will be developed is to modernise the charitable collection system to improve income within charities. The product will incorporate modern payment methods and technologies to enhance the user's experience and inevitably encourage the public to donate towards a given charity.

Edward Holmes

BEng(Hons) Electronic Engineering

Design, Development & Manufacture of a BCD Clock

An investigation into the design, development and manufacture of a binary coded decimal clock using discrete components… Looking at different clock generation circuits, counters, decoders and outputs.

Alexander Hyde

BEng(Hons) Robotics Engineering

Amphibious Surveying Craft

An amphibious robot that is capable of automatically choosing its propulsion method based on its surroundings to move more efficiently.
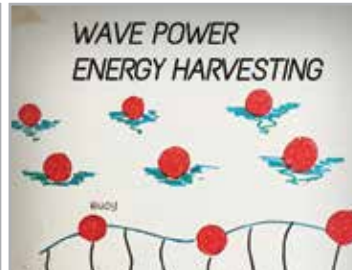
Nur Liyana Idzreen Idris

BEng(Hons) Electrical Engineering

Wave Power Energy Harvesting

Wave power energy harvesting aims to design a device which can generate electricity from the up and down movements of ocean waves. An innovative marine buoy has been specifically designed to generate electricity using Faraday's Law, and incorporates power electronics, boost converters, and energy storage devices.
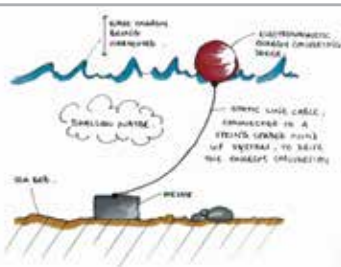
Ross Irving

BEng(Hons) Product Design Engineering

Portable Chargers Powered by Wave Energy

This project investigates the potential of wave powered chargers for small electrical devices, marketed towards developing countries and those who do not have basic electricity. Efficiency, functionality and cost are key aspects to this project. Two additional chargers will also be presented under the same brand image.

Ajay Kareer

BEng(Hons) Product Design Engineering

ajkareerdesign.com

Bamboo Based Bio-Composites with Engineering Applications

In the east bamboo has been used as a natural strong, light beam for centuries. Its place in modern engineering has been hindered due to its shape and inability to be of a uniform size for mass production. This project aims to create a uniform sized bio-composite tube to overcome this engineering problem.

Kobla Kugbega

BSc(Hons) Product Design Technology

Human Kinetic Energy to Charge a Personal Electronic Product

The concept of the design is to power a charging port via the use of kinetic energy through utilising the pedalling mechanism of a mobile bicycle. The charging port would be designed to connect to multiple different small electronic devices and charge them constantly for the duration of the journey.

Deryck Lamb

BEng(Hons) Mechanical Engineering

www.krop.com/dlambportfolio/

Accuracy of 3D Scanners on Multifarious Surfaces

This project is an investigation into 3D scanning technology, focusing on a Type 1 R&R study with two scanning technologies implemented, structured white light and laser based capture. These results are compared statistically and used to develop a standardised methodology for the uncertainty of measurement in scanners.

Asher Lamothe-McKenzie

BSc(Hons) Aeronautical Technology

Introducing Force Feedback into the Airbus Cockpit

In response to potential flaws in the Airbus cockpit design, this project aims to investigate and suggest ways of:
- interconnecting both pilot's side stick controls
- adding simulated force feedback to the flight controls
- mechanically driving the throttle levers to represent actual thrust settings.
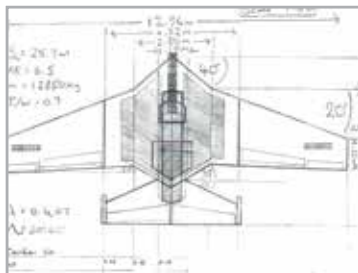
Tama Langford

BSc(Hons) Aeronautical Technology

Strike Aircraft in Modern Warfare

Research and development of strike aircraft designs for modern and future warfare. Maintaining and extending capability without risk to pilots, this project details the conceptual design of an unmanned Close Air Support-oriented aircraft, portable by a Boeing C-17 Globemaster III aircraft.

Alan Leask

BEng(Hons) Robotics Engineering

Wheels with Expanding Diameter

An investigation looking at increasing the wheel diameter and seeing the effects.

James Longbottom

BSc(Hons) Product Design with Management

Disinfecting Ambulances using UV-c Light

Using short wave UV-c germicidal light to disinfect the surfaces of ambulances around the world, to a standard that is higher than currently achieved through the use of current cleaning methods.

Alastair Morrison

BSc(Hons) Product Design Technology

Application of Emerging Technologies in Personal Electronics

Traditionally a product's form factor is governed by the limitations of the technologies on which it relies. Technologies are emerging that will allow designers to break this convention, this project investigates emerging technologies, resulting in the proposal of a future application that is justifiable and unique.

Ntandoyenkosi Ndhlovu

BSc(Hons) Product Design Technology

Design for the Disabled

Using design to challenge and change perceptions of the disabled was the driving force of the project, with the goal of re-designing mobility devices particularly the wheelchair. Taking a new perspective on mobility to challenge "social stigma" and the perceptions of wheelchairs and their users.

Oyewale Olorode

BSc(Hons) Aeronautical Technology

Retrofitted Winglet

The aim of this project is to design a retro fitted winglet for the Boeing 737 older generation. With the help of research and experiments this will be achieved. The aim of this project is to come up with an acceptable design that is appropriate to fit the desired aircrafts and test the effect in a CFD software.

Steven Pointon

BEng(Hons) Electrical Engineering

http://uk.linkedin.com/pub/steve-pointon/86/2b4/964

Design of a Solar Powered Security Light

The project is design, build and test a solar powered security light that will be controlled using a presence detector.

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Adam Richardson

BSc(Hons) Aeronautical Technology

An Investigation into Use of Additive Manufacturing in UAS

The aim of the project is to investigate the use of the developing manufacturing process additive manufacturing in the production of unmanned aerial systems. Developing an understanding of the impact the process will have on the UAS market and also consider likely future applications of the process in the sector.
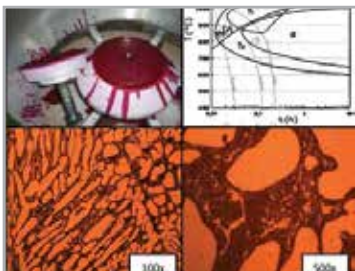
Sophia Rushton

BEng(Hons) Mechanical Engineering

Study into the Failure of a Valve Body in Manufacture

Failure analysis is paramount within engineering. By utilisation of various analytical methods, the examination into the failure that occurred in manufacture exhibited sigma phase indicating an insufficient heat treatment. This was verified by use of replication and aided with propositions to eliminate reoccurrences.

Callum Saunders

BEng(Hons) Electronic Engineering

www.linkedin.com/pub/callum-saunders/6a/8a8/260

Portable Applications of Free Space Optical Communications

Fast and reliable data transmission via fiber optic cables is made expensive by the cost requirement for these cables and laying them. Costs can be cut while maintaining efficiency of the data system by using a point-to-point laser based serial data transmission system: "Free Space Optical Communications".

Euan Smith

BSc(Hons) Aeronautical Technology

Lift Induced Drag Reduction for Commercial Aircraft

The design and aerodynamic properties of lift-induced drag reduction methods are reviewed and analysed for use on commercial aircraft. Various wingtip devices are constructed using CAD and analysed in a CFD package to ascertain the principles of their working.

Alexander Stanley

BEng(Hons) Product Design Engineering

Smart Material Interfaces

Exploring new possible ways to incorporate smart materials to create interface solutions.

Adam Williamson

FD Electrical and Electronic Technology

Mind Controlled Robot

This project aims to provide a one off concept design and prototype device that will demonstrate the possibility of interfacing a human's mind to an electronic device while offering a certain level of control over that device.
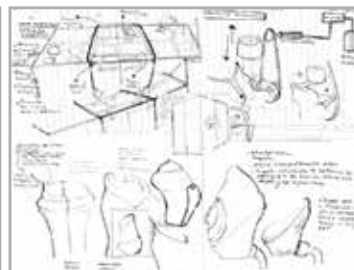
Kalum Wright

BSc(Hons) Product Design Technology

www.kalum.co/

Personal Urban Transportation

Urban areas are becoming more congested and it is becoming evermore difficult to find parking. This project aims to create a highly portable, efficient form of transportation to be used in urban areas.

Tarrall Yanzu

BSc(Hons) Product Design Technology

http://tarrallyanzu.carbonmade.com/

Waste Management System to Encourage Household Recycling

The aim of this project is the introduction of a new recycling system that will contribute significantly to the increase of recycling within households in the UK by approximately 40% over the period of 5/6 years. Technology, aesthetics and functionality are the key focus areas for the project.

Geography and Environmental Science

Stoke 21st May

Jessica Cartwright

BA(Hons) Geography

The Impacts and Reasoning of a 21st Century Pilgrimage

Research started with one footstep, the first of many thousands on the 790km journey from the South West of France to the North West of Spain. This path is known as The Camino de Santiago. The research analyses the reasons why individuals undertake a pilgrimage and the implications on the villages it travels though.
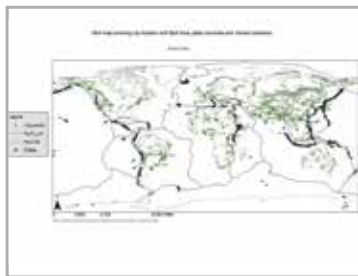
Alicia Clarke

BSc(Hons) Geography

Population Vulnerability in Megacities to Geophysical Events

Human vulnerability to earthquakes and volcanoes is a complex idea dependent on multiple factors. A more holistic method is needed to analyse specific populations' vulnerability, to ensure a deeper understanding. In particular it is important to assess why populations in megacities are more vulnerable.

Paviter Dhillon

BSc(Hons) Geography

Impacts of Fire on Madagascar's Dry Forest

Residents in Madagascar initiate forest fires to provide land that is used for agriculture. This study examines the outcomes fires have on forest carbon stocks and tree species diversity, while taking human and environmental impacts into consideration. Forest plots and remote sensing products were used to acquire data.

Priyanka Ferreira

BSc(Hons) Geography

Deforestation in the Western Ghats

This study investigates forest cover change of the Western Ghats in Goa from 1990 to 2013. More than 3,000 hectares of forest was lost due to mining and agriculture. Protected areas, topography and elevation had a major influence on the spatial distribution of the land cover change.

Mark Fleming

BSc(Hons) Geography

Has the UK Become More Seismic over the Past 20 Years?

The project reviews the seismicity of the UK between the 1st January 1992 - 31st December 2012. The project consists of a introduction, literature review, primary (GIS mapping, interviews) and secondary (database, maps) sources, SPSS (stats software) analysis and recommendations for future work.


Christina Hanna

BSc(Hons) Environment & Sustainability

Environmental and Economic Implications Oil Spill

The purpose of this research is to further understand the effect of the BP oil spill, investigating the economic and environmental impacts through sourcing secondary data. This project will investigate the ecological pressures the spill caused on commercial fishing, the economy and potential health threats.
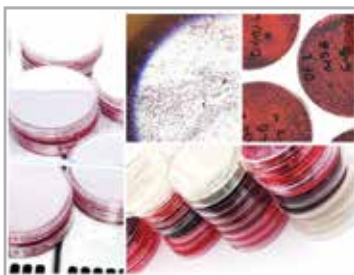
Kaval Hassan

BSc(Hons) Biomedical Science

Resistance vs Environment: A Tale of Bacteria and Bovine

A comparative environmental study, focusing on microbiota from topsoil samples obtained from local dairy and arable farms to identify the presence of antibiotic resistance resulting from antibiotics administered to dairy cows in the treatment of common mastitis infections.


Sarah Elizabeth Hughes-Lawson

BSc(Hons) Geography

Geoforensics of Sedimentology Investigations

The subject of this dissertation is to investigate whether soils from either side of the Peak District are of the same mineralogy and whether the soils are similar or different. In particular this study will be focussing on two areas in Sheffield and Biddulph. Difficulties include the correct interpretation of results.
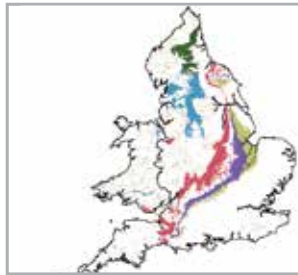
Matthew McEvoy

BSc(Hons) Geography

Shale Gas: Where the Frack Should we do it?

Fracking for shale gas is going to take off in the UK in the coming years, however, there are many disagreements about the ideal location. My project uses GIS to determine where is the ideal place for Fracking in England and Wales. It uses Quantitative, Qualitative date to give the first 'where to frack' map.

Matthew Palmer

BSc(Hons) Geography

Changing Corporate Sustainability Perceptions

Embedding sustainability is becoming increasingly important for companies as resources and customer competition intensifies. Through distributing an online survey I analysed perceptions from a range of different demographic groups to identify changing societal patterns, useful for companies to remain competitive.

Donisha Perkins

BSc(Hons) Geography

investigating-coralreef-conservation.webs.com

Coral Reef Systems: Rainforests of the Marine World

Issued with the title of "rain forest of the marine world" coral reef systems are one of the most biologically diverse ecosystems of the planet (Bryant et al., 1998). These systems share many characteristics with that of rain forests; breathtakingly rich diverse ecosystems, but fragile and exposed to many threats.
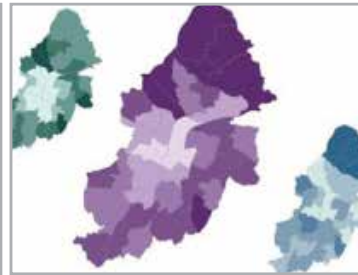
Kiran Pooni

BSc(Hons) Geography

Cold Climates, Energy Use and Households in Birmingham, UK

An investigation into the possible link between average mean temperature for winter months, domestic gas consumption and household types, in Birmingham, UK. This project aimed to illuminate the different kinds of relationships associated with energy use, by means of GIS mapping and statistical analysis.

Andrew Sheldrick

BSc(Hons) Geography

Investigating Volcanic Activity in Europe

This project investigates volcanic activity in Europe over the last 500 years and the impact that volcanic events have had on the region as a whole. The project focuses on the frequency, magnitude and duration of volcanic events in Europe and looks forward into how future volcanic eruptions could impact Europe.

Jack Tomkins

BSc(Hons) Geography

Fresher's Guide to the Stoke Campus

A student led project to immerse students in the landscape of the campus when they first arrive onsite to study. Whether they commute or live on campus this amalgamation of information in the form of a leaflet with two walking trails around the campus helps students better acquaint themselves with their new surroundings.

Anila Abid

BSc(Hons) Forensic Science and Criminology

Analysing the Degradational Effect of Blood on Projectiles

The study aims to analyse the effect of blood on bullets over a period of time and if a pattern between the samples striations develops across this time frame. It is yet to establish whether that can be harnessed into a timeline and if it is an objective method of analysis rather than subjective to that one projectile.

Jonathan Allen

BSc(Hons) Forensic Investigation

Comparing Technology and Paper Courtroom Evidence Presentation

A study that compared the effects of visual evidence presentation technology and paper based evidence presentation methods and investigates how the two affect-juries' understanding of evidence within a courtroom.

Alexis Baka

BSc(Hons) Forensic Science

Ballistics meets R Programming

A 0.22mm air riffle was used in order to create pellet holes that were then photographed using a VSC and a Digital SLR. The images were then manipulated using R and an estimated angle was generated that could then be used to determine a shooters' position.

Roxanne Barber

BSc(Hons) Forensic Investigation

Internal and External Variation between Different Saws' Cuts

This research looks at whether statistical programs can be used to identify variation in the size of partial cut marks made by two different saw types. It also looks at whether there is variation between different points along the cut sections within the same saw type.

Julie Bramble

BSc(Hons) Forensic Investigation

Research into New Techniques for Body Documentation

The use of modern technology to document a body at a crime scene. The digital era is upon us and new methods need to be researched to see if it is possible to utalise software programs for forensic purposes. A database maybe possible for expert witnesses to use to speed the identification process along.

Samantha Dye

BSc(Hons) Forensic Science

The Effect of Wrappings on the Level of Decomposition

The aim of this research was to determine whether there was a significant difference in the level of decomposition caused by two different forms of wrapping; a shower curtain and dust sheet. All other variables remained the same and the porcine heads were subject to the same environmental conditions.

Holly Furneaux

BSc(Hons) Forensic Science

DNA: Reducing Profiling Times

This project was designed to look at different ways to reduce the time needed to produce a DNA profile. This would allow police to make faster convictions. By making alterations to the current system used for completing DNA profiles, it was possible to determine potential methods to use in the future.

Hannah Greenham

BSc(Hons) Forensic Science

Does the Presence of Saliva Affect the Detection of Blood?

Bloodstains are one of the most common types of evidence found. The aim of this study was to examine the affect different detergents, drying times and volume ratios of blood to saliva has on the persistence and detection of bloodstains on denim. The stains were analysed by presumptive tests and observed under a VSC.

Policing, Criminal Investigation and Forensic Science

Stoke 21st May

Thomas Hobart

BSc(Hons) Forensic Science

After the Smoke: Can Gunshot Residue Tell Us More?

This study examined the gunshot residues of three different cartridge types to compare the ratios of the three most common elements found in GSR. The analysis was carried out using a scanning electron microscope and the attached energy dispersive x-ray. This could add weight to firearms evidence in court.
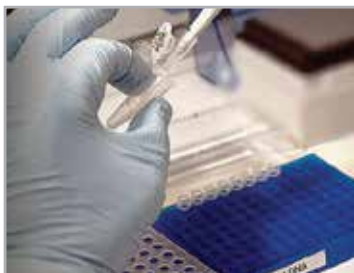
Kate Jones

BSc(Hons) Forensic Biology

Modifying and Reducing the Standard DNA Profiling Process

This research focuses on the standard DNA profiling process and modifies the two most time consuming stages - extraction and amplification - in an effort to discover the point at which reducing the process forfeits profile quality.

Georgina Linton-Smart

BSc(Hons) Forensic Science

Does Burying a Body in a Material Bag Affect Decomposition Rate?

The rate of decomposition of pork in bags made from different material was experimented to see if there is a noticeable difference between bag types. The bags were recovered on a regular basis to document and photograph the decomposition changes and re buried the same. A control, buried with no material bag, was used.
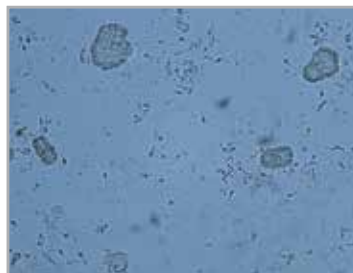
Natasha Louise Lomas

BSc(Hons) Forensic Investigation

The Secondary Transfer of Semen following Vaginal Seepage

The absorbance of semen through two knicker materials was analysed to determine the likelihood of obtaining evidence resulting from secondary transfer onto additional fabrics. The purpose of the research is to impact upon the availability and evidential value of exhibits obtainable in cases of sexual assault and rape.
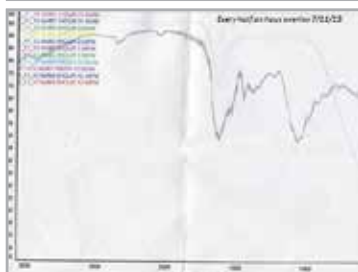
Nasma Malik

BSc(Hons) Forensic Science

Developing a Signature for Forensic Identification of Saliva

Saliva is one of the commonly retrieved DNA rich evidence types. This study investigates the potential of ATR-FTIR analysis as a non-destructive, confirmatory method for saliva evidence. Spectral images were generated for wet and dry saliva samples at varying ages to generate a reference signature spectrum.
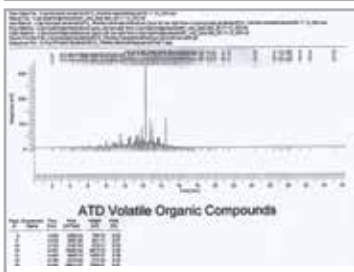
Michael Marshall

BSc(Hons) Forensic Science

The Persistence of Volatile Organic Compounds

To analyse the persistence of volatile organic compounds on wood treated with various proprietary products, using headspace anaylsis. The samples will first be initially screened using a fast gas chromatograph programme before the full analysis took place using the thermal desorber.

Aiden McDonagh

BSc(Hons) Forensic Science

Using Acetate to Detect Clandestine Graves

This research investigated whether a quick, simple and cost effective coloured reaction could be devised that used soil samples from an area suggestive of a clandestine burial. This reaction could be used to identify acetate which is known to leach into the surrounding grave environment from a decomposing cadaver.

Heather McKinlay

BSc(Hons) Forensic Science

Finding the Detection Limits of Diluted Blood and Semen

Blood and semen are the most common types of body fluids found at crime scenes and identifying their presence can be crucial to investigations. The aim was to find their detection limit by the use of presumptive and confirmatory tests by comparing their sensitivity to literature.

Policing, Criminal Investigation and Forensic Science

Stoke 21st May

Craig Ratcliffe

BSc(Hons) Forensic Investigation

The Analysis and Interpretation of Bloodstains on Footwear

BPA is an imperative forensic discipline. A crime scene reconstruction was created to critically analyse the bloodstains present on assailant's and bystander's footwear. Distribution of bloodstains significantly varied due to the distance of the bystander, and type of contact to the target such as a kick or stomp.


Kathryn Roberts

BSc(Hons) Forensic Science

Analysis of Heat Damage and its Distribution on Clothing

This research aims to show the damage done to various garments by accelerated fires and the difference in its distribution depending on the volume of accelerant used. The synthetic fibres analysed were acrylic, polyester and nylon with cotton representing the organic fibres.
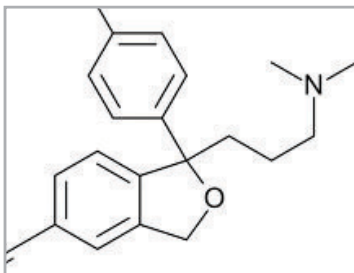
Meera Sidat

BSc(Hons) Forensic Science

Recovery of Citalopram in Human Hair using GC/MS

This research project investigates the effects of chemical treatment on the recovery of Citalopram, a selective serotonin reuptake inhibitor in human hair samples using Gas Chromatography-Mass Spectrometry. Hypothetically, the concentration of the drug should decrease following chemical treatment.

Alun Thomas

BSc(Hons) Forensic Science

Population Study of Fibres with Initial Screening

After collecting fibre samples from a range of window frames each one is then screened using a portable usb microscope. From this a series of limitation and recommendations are suggested to allow the portable microscope to come up to the same standards as other microscopes with regards to initial fibre screening.

Laura Thomas

BSc(Hons) Forensic Science

Does the Position of the Body Affect Detection by GPR?

An investigation detecting buried pig cadavers in various positions using Ground Penetrating Radar in simulated forensic cases. Sub research to find if grave cuts or bodies are detected by GPR. Analysis of GPR raw data was undertaken over an 11 week decomposition period and the data was analysed to detect anomalies.
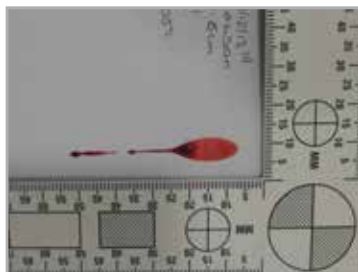
Shaniqua Thomas

BSc(Hons) Forensic Investigation

The Influences of Blood Drops Shape and Size

Interpretation of bloodstain evidence are of significant importance as factors influence accuracy of blood drops resulting in misinterpretation. The accuracy and reliability of the precision of calculated and true angle of a blood drop were tested by releasing single blood drops onto surfaces from various angles.

Mica Tolosa

BSc(Hons) Forensic Science

BPA of Different Blood Viscosity Levels and Weapons

Focusing with drugs (Aspirin, Alcohol and Heparin) that lower the viscosity of blood and four weapons (bat, brick, hammer and knife) to determine the effect of these factors towards blood pattern analysis. Analysis the angle of impact (30°, 60° and 90°) and drying time of the blood to determine any difference.

Tina Varley

BSc(Hons) Forensic Investigation

Validation of a Drying Cabinet after Fingermark Enhancement

Research has been requested to validate the use of a drying cabinet to accelerate the drying process of a surface that holds a fingermark. Introducing artificial drying conditions may reduce the time of the drying process but we need to ask ourselves has the quality of the fingermark been affected?

Emma Ward

BSc(Hons) Forensic Science

Detecting and Quantifying Methanol in Counterfeit Alcoholic Beverages

A method was revised for the identification and quantification of methanol in counterfeit alcoholic beverages that were supplied by trading standards. Combinations of columns and detectors were used to achieve idea baseline separation and Gaussian peaks. A method was established and samples analysed.
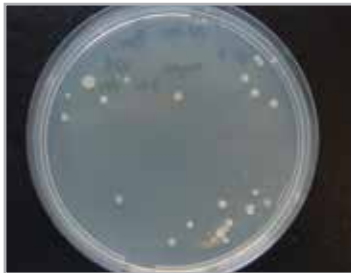

Gregory Watson

BSc(Hons) Forensic Science

Toxic Metals in Counterfeit Alcohol

In poverty ridden areas, the demand for cheap production of alcohol is getting larger. This study looks at the level of toxic metals in sized counterfeit alcohol samples in the UK and analyse them compared to that of the legal limit for alcoholic beverages.

Naomi Watt

BSc(Hons) Forensic Science and Criminology

www.linkedin.com/pub/naomi-watt/88/5bb/40b

***Pseudomonas Aeruginosa* and Determination of Burial Time**

This study focuses on the viability of using microbial species *Pseudomonas aeruginosa* to help to determine the period of time a body has been buried, by studying its growth patterns as meat decomposes.
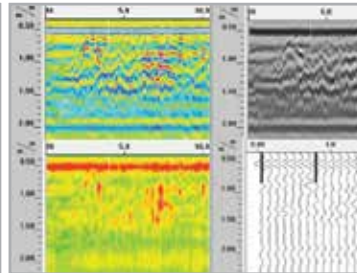
Czelsie Weston

BSc(Hons) Forensic Science

www.linkedin.com/pub/czelsie-weston/4a/1bb/44b

GPR: A Reliable Method of Detecting Buried Remains?

Ground Penetrating Radar (GPR) was utilised to evaluate its reliability in the detection of buried remains where varied degrees of burning or cremation were present. Data was collected at 2-week intervals over a period of 14 weeks. RADAN software was used for the analysis and interpretation of the data.

Iwan Witt

BSc(Hons) Forensic Science and Psychology

http://lnkd.in/bEpwR3m

The Feasibility of a UK Human Taphonomic Research Facility

Forensic Taphonomy studies the Human decomposition process to help determine post-mortem intervals in establishing time of death. Taphonomic research is highly climate specific and currently there are only facilities located in America. Therefore the feasibility of a UK Taphomic facility was considered.

Computing and Software Engineering

Stafford 23rd May

Samuel Adams

BSc(Hons) Computing Science

Multi-Purpose Artificial Intelligence

This project is a Multi-Purpose Artificial Intelligence program capable of producing a convincing simulation of intelligence by being able to hold a conversation with a tester and displaying other capabilities as learning and long-term memory.

Claire Barnett

BSc(Hons) Computer Science

Prototype Sensor Triggered Safety System for Motorcyclists

A prototype android application for motorcyclists that will be sensor triggered to create an emergency message service in the event of an accident.

Andrew Bennett

BEng(Hons) Computer Science

Interview Management System with Audio Encryption

An interview management system with the ability to both record and encrypt audio files. The encryption technique used will be a newly developed algorithm derived from researching existing high level algorithms such as AES allowing the effective design of an algorithm to manipulate low level data.

Daniel Bickerton

BSc(Hons) Computer Science

Disaster Recovery Emulation and Testing

Disaster recovery testing is a difficult area for many organisations, this package will emulate a disaster and then test the outcome based on the disaster recovery details provided and produce a probability of success for your disaster recovery plan.

Christopher Bossons

BSc(Hons) Applied Information Technology

Supporting a User Generated Community for Food and Nutrition

A Reverse Recipe Android application designed for mobile and tablet devices, targeted at college level users with limited time spans and cooking experience. The application searches recipes based upon inputted ingredients, allows users to add their own recipes and rank others, and utilises Facebook integration.

Christopher Buckley

BSc(Hons) Computer Networks and Security

www.cbuckley.com

Wireless Trilateration using a Low Cost Controller

Using a low cost Raspberry Pi controller to gather device specific positional information using Trilateration and 802.11 wireless.

Shreya Bundel

BEng(Hons) Software Engineering

Task Tracking Application for Project Management

A web-based project management tool to help project managers track their team's progress and staff status in a dashboard and tasks listed in the form of To-Do, Doing and Done. Ability to view the workflow and review notifications which are produced on any project activity is embedded as a part of the system.

Imran James Chaudhry

BSc(Hons) [Top up] Computing Science

Mobile Data Scanning Application

This project looks into current technologies within smartphones that are capable of delivering a more streamlined stock management system.

Lloyd Clark

BSc(Hons) Computing Science

Stock Checker

A database to help a small business manage their stock effectively. Main Features: Manage Stock; Compare Sales; Order sold stock; Calculate profits and expenses.

Harry Clewlow

BSc(Hons) Computer Science

File Encryption Using Bluetooth Authorization (SecureBlue)

SecureBlue is an encryption software package which utilities modern encryption standards and Bluetooth technologies to provide a secure user-friendly environment to use on personal devices. SecureBlue has an easy setup, user accounts, customization of interfaces and supports a variety of encryption algorithms.

Benjamin Donnelly

BSc(Hons) International Software Engineering

Data Mining of Real Time Web Metrics

A project exploring the use of data mining on big data, specifically system metrics data gathered by an application monitoring solution. This project aims to produce a profile for a given website, and from this produce predictions for the future of the site. This project is in collaboration with Intergral GmbH.

Samuel Dowdall

BSc(Hons) Computing Science

Football Management System

The system that I propose is a web based football management system. The system will aim to aid coaches analyse and track a player's performance and progress over a period of time.

Robert Eardley

BSc(Hons) Web Development

roberteardley.net

Welcome Week Assistant

An application to assistant students during welcome week.

Andrew Edwards

BSc(Hons) International Software Engineering

www.ajed.net

Prototype System for Speech Recognition in Meetings

A project examining ad-hoc meetings with the intention of enhancing the quality aspects of this informal business process. This project builds upon groupware and computer supported cooperative work research, speech to text processing and human centred technology.

Lewis Gavin

BSc(Hons) Computer Science

A Cross Compiler for MC68HC11 Written in C++

The project delves into the realms of program assembly and compilation. The produced artefact allows for assembly programmers for the MC68HC11 microcontroller to write and assemble their code on a personal machine, creating an executable in a format that can be executed on a MC68HC11 processor.

Darren Gilbert

BSc(Hons) Applied Information Technology

http://darrengilbert.dnsd.me/

Collaborative Integrated Development Environment

CO:Lab is a web application that aims to bring a solution to distributed development, bringing real time collaboration methods into an IDE. The application includes; planning tools, methods of communication and real time code editing with other developers.

Christopher Hanley

BSc(Hons) Computer Science

Remote Control of a Real Time System from a Mobile Device

My project allows for a remote device such as a smartphone to have direct access to a running real time system. The system will be able to report back to the user through their smartphone, alerting them of movement or alarms through the use of a camera module and various switches.

James McElroy

BSc(Hons) Software Engineering

The Personal Cloud

The Personal Cloud is a consumer targeted distributed cloud network which allows users to connect their devices into a controlled 'Personal Cloud Environment' where data and resources can be shared amongst any device they own.

Craig Milton

BSc(Hons) Applied Computing

http://xanderproductions.net78.net

Net Environments for Academic Development and Success

Growing Education using Net Environments for Student Improvement and Success (GENESIS) is a software environment with a key purpose to draw closer relationships between students, staff, and the Student Union to improve student progression, performance and achievement. GENESIS uses an innovative approach to education.

Gareth Barker

BSc(Hons) Applied Computing

Implementing N.F.C. in a Multi Shift Environment

To counteract the problems suffered by businesses, often financial, when running a variety of shift patterns this project will develop an android application to use Near Field Communication to read shift data from an NFC tag and transmit the end of shift data to an office device.

Thomas Pooler

BSc(Hons) Computer Science

Kinect Sensory Room Application

A Kinect Application that uses the Kinect's built in colour streaming and skeletal tracking hardware in order to create a simulated Sensory room for children with Autism or special needs.

Nyakeh Rogers

BSc(Hons) Computing Science

www.nyakeh.co.uk

Software as a Service Demonstrated by a Mortgage Calculator

A mortgage calculator hosted in the cloud and made accessible through a REST API. This service is freely available to developers. As a demonstration of how the service could be used a website and Android application were developed which both utilise the web service.
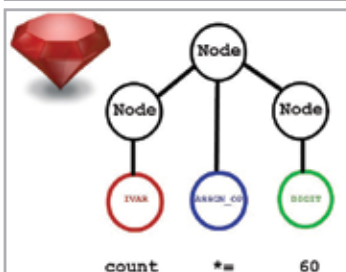
Matthew Ryder

BSc(Hons) Computer Science

http://mattryder.co.uk

Implementing a Ruby Language Interpreter

The research and implementation of an interpreter for the Ruby programming language, based around the original specification by the language's author, Yukihiro Matsumoto.

Matthew Sayers

BSc(Hons) Computing Science

Database Management and Processing Tool for Use in Business

The project is a development and processing tool to allow the creation of new databases through minimalist workings via pre-determined criteria.

Gary Tan

BSc(Hons) Computing Science

A Prototype Data Driven System for Employee Induction

This prototype eLearning application targets the company induction process, with a different approach taken, to identify specific areas such as data protection, and transform corporate procedures to accommodate a modern approach. As companies become more I.T driven this application's goal is to update this process.

Stephen Topping

BSc(Hons) Computer Science

Anti-Clone

Anti-Clone is a piece of software that is lightweight duplicate file remover that can be run on most computers. The program can be used to find duplicate photos to duplicate copies of work.

Thomson Reuters 2014

David Upton

BSc(Hons) Software Engineering

https://www.linkedin.com/in/davidjupton

Stock Recommendations Based on Social Media and News

Using sentiment analysis to analyse social media and news articles, combined with technical analysis to analyse stock market data, this project delivers buy/sell/hold recommendations for stocks trading in the FTSE100 index.

Matthew Walsh

BSc(Hons) Software Engineering

Nutrition Director

An Android application to manage the user's diet regardless of their dietary constraints such as allergy, intolerance, and illness. This includes both suggesting suitable weight-related goals and tracking their intake utilising nutritional information obtained automatically from multiple online sources.


Joshua Williams

BSc(Hons) Computer Science

Exercise Assistant and Gym Management Solution using RFID

The project explores ways of providing a more personal experience to gym's users through the use of RFID and sensor technology. Devices worn by the gyms members captures data from the user's muscle groups and will inform them when to change machine; while RFID tracking will allow the gym staff to monitor equipment usage.
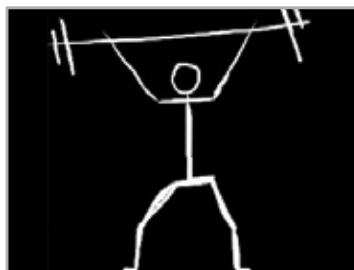

Oliver Wright

BSc(Hons) Software Engineering

Prototype Home Physiotherapy Application

The Prototype Home Physiotherapy Application will guide a user through the process of physiotherapy from start to finish. It will provide an exercise programme for the user and it will track the progress of the user through their exercise programme. It will also give the user feedback using Motion Capture.
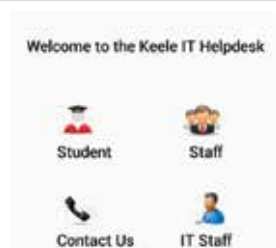
Nighet Zaman

BSc(Hons) Applied Computing

IT Help desk

Mobile application designed to assist the IT help desk at Keele University. The mobile application will help students/staff to troubleshoot minor IT issues and allow for major ones to be logged through their mobile devices. It will also assist IT technicians to check current jobs that need resolving.

Film

Stafford 23rd May

Ryan Angell

BSc(Hons) Film Production Technology

Fear This Day Music Video

Music video created for Cryptic Anger; a five piece metal band.

Helen Bacon

BSc(Hons) Film Production Technology

An Investigation into how Editing can affect the Genre

An in depth look into different editing techniques and how they can be used to change and manipulate a film's genre.
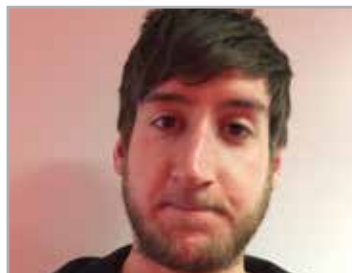
Thomas Barragry

BSc(Hons) Film Production Technology

An Investigation into the Evolving Format of Documentary

Technologically, what has changed in Documentary production, and why? This project investigates what has changed over time within Documentary, and how advances in technologically have directly affected this.

Lewis Bayley

BSc(Hons) Film Production Technology

An Investigation into Stereoscopic 3D Cinematography

The project is an investigation into the differences in shooting Stereoscopic 3D, compared to normal 2D film. These differences include such things are Composition, Lighting and Post Production.

Richard Bell

BSc(Hons) Film Production Technology

Σ (Sigma)

A film chronicling the relationship of Christian and Simone, told in chapters with each chapter taking influence from different styles of film.

Tom Bennett

BSc(Hons) Film Production Technology

www.productiontom.com

A Life for Kennedy - Methods for a Director's Visual Style

A short film based on the true story of the guilt secret service agent Clint Hill bared after the assassination of John F. Kennedy. The story expects a finished project that is high-standard and so my goal is to give the film a unique identity with my dissertation title being "Methods for a Director's Visual Style".

James Burrows

BSc(Hons) Digital Film and Post Production Technology

Alice & Jack

A short film looking at the use of composition and editing to show a warm and heartfelt story of the characters, Alice & Jack. It looks to explore human emotion and how we cope with tough times in life.

Harsha Chandarana

BSc(Hons) Television Production and Technology

Broadcasting National and International Documentaries

This project focuses on a genre of dance that has evolved internationally without anyone really noticing; Bollywood. It was created due to the gap in today's market that both national and international TV broadcasts could benefit from. This project looks into the Production processes of a Producer.

Film

Dale Collier-Woods

BSc(Hons) Film Production Technology

The Effects of Different Editing Styles

This project will discuss the benefits and limitations of editing and how it affects a scene. This can include how editing can change perspective between characters, how sound editing can affect a scene and how symbolism can be created through editing.

Kate Craft

BSc(Hons) Film Production Technology

"SOLUS"- How Colour Grading is used in Multiple Narratives

SOLUS tells the stories of a group of characters, each of whom have sold their souls to the Devil. Their reasons for this decision, tales of success, love, greed and regret, are told using different styles of colour grade, reflecting the emotions, narratives and genres of each backstory.

Edward Davidson-Bowman

BSc(Hons) Film Production Technology

www.edbpro.co.uk

The Technical Implications of Creating an Action Sports Film

This project is used to investigate and discuss the processes and practices behind making an action/extreme sports film, specifically mountain biking. As well as creating the film itself.

Charlotte Davis

BSc(Hons) Digital Film and Post Production Technology

First Contact: The Art of the Trailer

An analytical look at film trailers and the editing techniques used in their construction. Specifically looking at how the trailer's construction is effected by the original film and whether there is a format for a trailers construction dependant on the original film.

Laura Dolan

BSc(Hons) Film Production Technology

Radio Development and Production

A project communicating a deep understanding of radio drama right from development, to production, in order to create a radio drama appropriate for broadcast. I have created a pilot episode of a three part serial drama set just before WW2 called 'Deception'.

Paul Downie

BSc(Hons) Film Production Technology

An Investigation into Ultra HD

With the ever expanding technology market, people are always looking for one step better, and trying to invent a revolutionary product that will dominate the technology market. This project is entitled 'An Investigation into Ultra High Definition', more specifically what 4k is and how it performs.

Stuart Dudleston

BSc(Hons) Film Production Technology

www.stuartdudleston.com

Insomnia

We follow Oskar through one of a number of lonely, sleepless nights that he's all too familiar with. This short film is supplemented by personal research into the application of photography lenses to cinema production.

Andrew Giff

BSc(Hons) Film Production Technology

Radio Drama Production

This project involved the production of an original sci-fi radio comedy show for independent distribution. This included creating an original idea, writing the script and then casting and recording the show itself.

Film

Stafford 23rd May

Robert Gittings

BSc(Hons) Digital Film and Post Production Technology

Investigation into Digital Compositing for Film and Video

This dissertation is aimed to challenge myself as a film maker and compositor and address the many problems that an under experienced compositor could face when creating complex visual effects and my project aims to investigate compositing techniques that go into creating visual effects shots in film.

Mitchell Goodman

BSc(Hons) Film Production Technology

The Effect of Digital Compression on Digital Video Content

The use of video coding to compress and decompress a video signal minimizes the amount of data required to be transmitted thus providing greater flexibility for distribution. This Project will investigate both the economic and technical limitations of delivering video media and the result that has on the image quality.

Elaine Hannigan

BSc(Hons) Film Production Technology

Challenging Traditional Filmmaking to Better Represent Women

An investigation looking into how challenging the traditional form of filmmaking can help to better represent women. Looking at filmmakers who have broken the rules of traditional cinema before and utilising those methods into the practical portfolio aspects of the project.

Jonathan Hill

BSc(Hons) Film Production Technology

www.youtube.com/
jonathandh93

The Afterparty, a Low Budget Feature Film

'The Afterparty' is a Low-budget Feature Film being produced and directed by Jonathan Hill. It is a Thriller that follows the story of fictional Journalist Robert Gordon and how trouble he has caused in his past has returned to haunt him. 'The Afterparty' is filmed entirely on the Canon 60D with a crew of 4.

Gareth Lang

BSc(Hons) Digital Film and Post Production Technology

www.garethlang.co.uk

Visual Post-Production in Short Film Making

Film is a group medium with many people helping out in all stages. However with short film and small budget projects, is it possible that one person can act as many with modern post-production technology.

Michael March

BSc(Hons) Film Production Technology

'Colt Mettle' Western Trailer

A feature film trailer set in the old west follows three Irish brothers as they fight back at their oppressors. This piece accompanies an investigation into the common methods and approaches used by the special effects industry.

Maneesh Mathew

BSc(Hons) Digital Film and Post Production Technology

An Investigation into the Blackmagic Cinema Camera

This project looks into the advantages and disadvantages of using the Blackmagic Cinema Camera With a price tag of £1300 (as 15 March 2013) compare other more expensive and larger cameras.

Jack Peace

BSc(Hons) Television Production and Technology

An Investigation into Sports Shows

Investigating into Sports Shows has been an exciting and passionate project for myself. The investigation has lead me to cover such as: producing a show from scratch creating all elements needed, completing analysis of different sports shows, sports broadcasting rights within the Premier League and much more.

Film

Alexander Redmond

BSc(Hons) Film Production Technology

www.filmstory.co.uk

The Autistic Audience - Is this a Feasible Market in the UK?

The aim of this project was to gain an understanding of Autism; investigate if there is a feasible market for specialist film screenings in the UK film industry. A promotional trailer was then created to promote 'Autism Friendly Film Screenings'.

Elliott Reeves

BSc(Hons) Film Production Technology

Σ (Sigma)

A film chronicling the relationship of Christian and Simone. Told in chapters with each chapter taking influence from a different style of filmmaking.

Matthew Salmon

BSc(Hons) Film Production Technology

www.mattsalmonfilms.co.uk

Alice & Jack

A short film looking at the use of composition and editing to show a warm and heartfelt story of the characters, Alice & Jack. It looks to explore human emotion and how we cope with tough times in life.
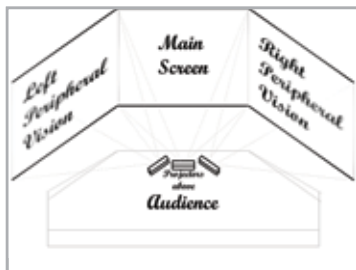
Jack Satchell

BSc(Hons) Film Production Technology

www.jacksatchell.com

Σ (Sigma)

A film chronicling the relationship of Christian and Simone. Told in chapters with each chapter taking influence from a different style of film making.

Denise Smith

BSc(Hons) Film Production Technology

Cinema in Peripheral Vision

An innovative design idea for a new experience in viewing a film that could lead to more audiences in the cinema. Created using a custom built rig for multiple cameras mixed with a new style of filming and editing to create extreme wide angles so the audience can view a film while still using their peripheral vision.

Christopher Waterfield

BSc(Hons) Film Production Technology

chriswaterfield.com

An Investigation in to Digital Cinema Cameras

This project compares high-end digital cinema cameras with low-end cameras to see which provides best image quality and value for money. The project features exclusive primary research from industry figures including, Shane Hurlbut ASC, David Mullen ASC and Gary Shaw, plus camera testing, analysis and a short film.
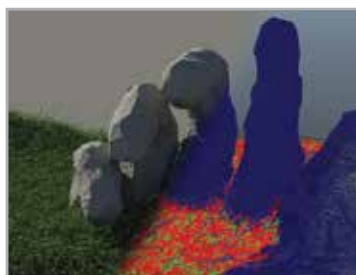
FX

Tyrone Bolton

BSc(Hons) CGI and Digital Effects

http://boltonviisuals.wordpress.com/

Interior Architectural Visualisation

To create an accurate representation of a photorealistic interior design.

Alan Herbert

BSc(Hons) CGI and Digital Effects

www.alanherbertvfx.com

Sleeping Giants

Inspired by a couple of China's southern national parks, this is a project that combines sculpted 3D assets with more traditional matte painting skills to produce photo-realistic, fantasy digital environment.

Sean Johnston

BSc(Hons) CGI and Digital Effects

seanjvfx.co.uk

Graduate Scripting + VFX Portfolio

A small exhibition of compositing and scripting work undertaken as part of my award.

Ashley Maman

BSc(Hons) CGI and Digital Effects

www.bluescarfvfx.co.uk

Flipping the 4 Seasons

A visual piece showing the 4 seasons that are 'flipped' over between a person's hands. On each 'Flip' the scenery will be affected by the seasons which will be presented in a semi-interactive way.


Andrew Marjoram

BSc(Hons) CGI and Digital Effects

Photorealistic Architectural Visualisation Rendering

The aim of this project was to create a series of photorealistic renderings of an industrial-styled Scandinavian bedroom, using both self-made and sourced assets. The project was completed primarily using 3ds Max and V-Ray, but utilised other software such as Marvelous Designer and Photoshop/After Effects.
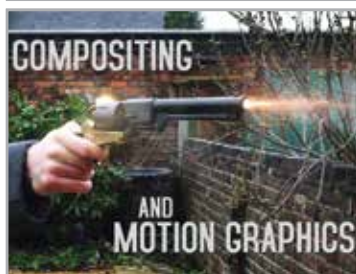
Jessica Oldland

BSc(Hons) CGI and Digital Effects

www.jessoldlandvfx.co.uk

Compositing and Motion Graphics

Presenting a display of motion graphic animations designed for television, also featuring shots composited for a student film project.

James Paul

BSc(Hons) Games Concept Design

An Investigation into the Continuity of a Design Production

A study into game creation and the concept design process focusing on how story affects design. After creating a multi factional universe artwork was created to show the factions based on their histories.

Jermaine Rajis

BSc(Hons) CGI and Digital Effects

http://jermainerajis.wordpress.com/

iPhone 5s Product Visualisation

This project is based on research done for a dissertation about real world objects vs photorealistic objects and the progression and benefits of photorealism.

FX

Adam Sandy

BSc(Hons) CGI and Digital Effects

www.thefluxway.co.uk

Ellys Manor House - What If?

What if one of the most important historical artworks of our country's history was lost forever? This short film aims to show the outstanding features of this highly significant manor house which dates back to the Renaissance period with its importance spanning history, art and architecture of Lincolnshire and England.

William Stewart

BSc(Hons) CGI and Digital Effects

http://bryanfaffer.wix.com/williamstewartvfx

Serenity - A Visual Effects Shot

A recreation of a professional visual effects shot from the 2005 film Serenity, the project features the titular spaceship (fully modelled and textured using a suitable 3D application) coming in to land in a futuristic environment.
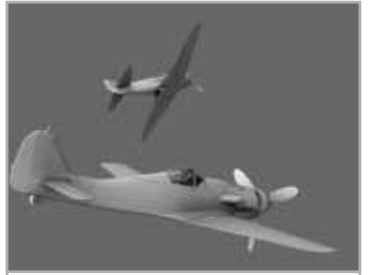

Thomas James Thornton

BSc(Hons) Digital Film and 3D Animation Technology

tj-vfx.co.uk

Visual Portfolio

Portfolio of work including both university and freelance projects. This contains matchmoving, 3D and Compositing shots, including stereoscopy work.

Christopher Williams

BSc(Hons) CGI and Digital Effects

www.christopherwilliams-vfx.co.uk

The Final Clash

A scene from the last few days of the European theatre of World War II, depicting an aerial clash between two high performance fighter planes, a Russian Lavochkin La-7 and a German Focke-Wulf Fw-190D.

Games Design and Production

Stafford 23rd May

Emily Barber

BSc(Hons) Computer Gameplay Design and Production

The MMO Formula of Graphical User Interfaces

This project will be looking at the MMO Formula of Graphical User Interfaces and its impact on current MMORPGs today. Research, surveys and basic design sketches and finally a User Interface Add-on will be created from this data to create a more refined and up to date User Interface for the MMORPG World of Warcraft.

Richard Bartlett

BSc(Hons) Games Audio Design

The Musical Themes of Character Alignment

What musical themes sound intrinsically good or evil, lawful or chaotic? Using existing compositions from film and video gaming, I create a design tool that ties specific character alignments and certain musical themes together and thus use it to write short musical excerpts that best portray each alignment type.
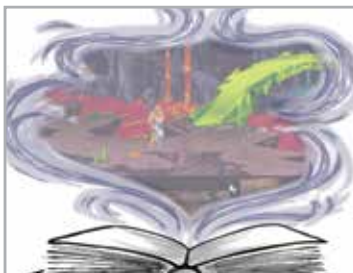
Nicola Bednarz

BEng(Hons) Computer Games Design

Turning a Passive Text into an Interactive Game

This project will highlight the steps taken to transform a passive text, in this case a fictional book, into a fully interactive game from the graphic adventure genre. The final product displayed is a playable level of the designed game, made using Adventure Game Studio.

Sarah Blackburn

MEng(Hons) Computer Gameplay Design and Production

Psychophysiological Research into Fear in Games

This study looks at the techniques used in horror games, both past and present, and why they are failing to scare their intended audiences. These techniques are researched and the implemented into a new test level to try and determine what is going wrong or right in horror games and how they can be improved.

Elliot George Darlington

BSc(Hons) Games Technical Art

Evolution of 2D Platform Games

This project is based around the progression of the 2D Platform games from a mechanical standpoint. It is by understanding these developments that accurate estimations into the future of the genre can be made. A remake of the first level of Ghosts 'n' Goblins has been constructed, demonstrating these modern mechanics.
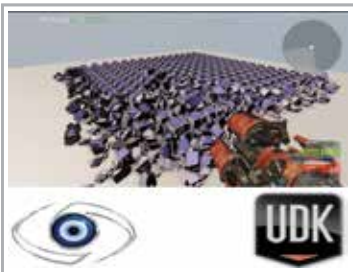
Jie Deng

BSc(Hons) Computing Science

A Visual Novel with Complex Interaction

My project is a visual novel. Visual novel is a well-known type of PC game in East Asia especially in Japan. The customers are attracted by the multimedia used and the interaction in the visual novel. The player can change the story by making different choices throughout the game.

Benjamin Dixon

BSc(Hons) Computer Games Design and Programming

Investigation into Destructible Environments in Game Engines

Looking at the technical data of destructible environments to form benchmarks, this project looks to analyse the tools & pipelines for creating destructible environments within UDK and CRYENGINE to develop one environment in both engines to see which one would be preferential in developing destructible environments.
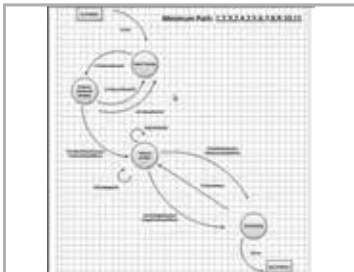
Thomas Dodd

BSc(Hons) Computer Gameplay Design and Production

The Impact of Bugs on Short-term Game Development

Testing is often a process that is undermined, especially in games with short development cycles. This project seeks to determine the most prevalent and severe bugs found within games created in a short period of time.
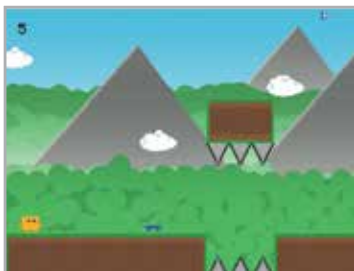
Games Design and Production

Stafford 23rd May

Christopher Edwards

BSc(Hons) Computer Games Design

http://chrisedwards1.wordpress.com/
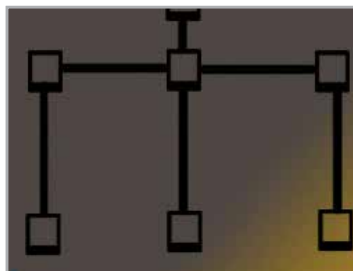
Investigation into Talent Trees

Using talent trees two players will chose three characters from a list of four with their own defining talent trees to create a custom team. Which they use to battle each other in a card game, depending on the choices made with the talent trees will dictate the type of game and who wins.

Leon Field

BSc(Hons) Computer Games Design and Programming

Rapid Games Development Framework

Building games with agile methods in small teams.

Thomas Greener

BSc(Hons) Computer Gameplay Design and Production

thomasgreener.co.uk

Investigation into How Light and Sound Affects Gameplay

Investigated how a game's light and sound design can affect gameplay. A survey explored how people perceive the environment and how they feel they would progress through a theoretical level. This was combined with a practical test to discover how the survey's findings transferred across to a custom designed level.
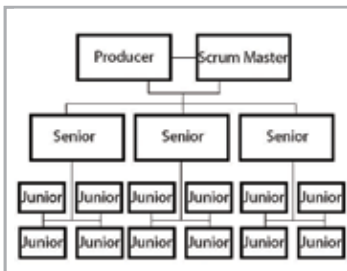
Jacob Harrison

BSc(Hons) Computer Games Design and Programming

Information and Communication Flow in Games Development

How information and communication flow affects companies in the Games industry and group projects for games courses at university.

Alexander Jokic

BEng(Hons) Computer Games Design

Modular Space Combat

Strategic space combat games have never been easy to pick up and just play, my project will bring space combat to a larger audience by bringing players together in multiplayer combat with their own custom fitted ships. Ships will bring out players personalities and play style utilizing modular rigging.

Ga-Jun Leung

BSc(Hons) Computer Gameplay Design and Production

https://sites.google.com/site/bluecloud0228/

Creation of Novel Digital Collectible Card Game Using Unity

What makes a good collectible card game? What game features and mechanics are there and how are they being used to keep their audience's interest? A card game prototype has been created to demonstrate an eclectic design based on the research outcome and analysis on the strengths and weaknesses of different CCG games.

Martin McKinley

BSc(Hons) Computer Gameplay Design and Production

The Nemesis's Pursuit

I'm going to produce a document for a game, which will use the new narrative structure being developed in my fyp to make anti-hero's as the focal point of the story; this will forge the character becoming a hero being made into a fully pledged villain or an antagonistic anti-hero.

Luke Moffoot

BSc(Hons) Computer Gameplay Design and Production

Biome Creation Kit

The project aims to create an easy to use system that can generate a biome or small world within a 3D or 2D space. The system will procedurally generate this world based on settings the user has input - giving power to the user but maintaining the strength of being able to generate a world/scene/biome procedurally.
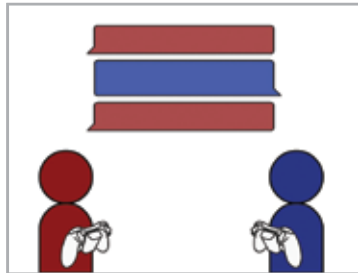
Games Design and Production

Stafford 23rd May

Chris Nixon

BSc(Hons) Computer Games Design

Creating Free Running Animation for Games

The project aims to create a fully animated playable character for use within a games engine. Animations will be produced using motion capture and hand animation techniques. Current industry technology and methods are utilized to convey the weight and realism of the character yet retain efficient player control.

Adam O'Neill

BSc(Hons) Computer Gameplay Design and Production

Social Dynamics in Multiplayer Gameplay

This project analyses the current state of multiplayer gameplay, how players interact with each other and the game's world, and suggests a potential future view of how multiplayer gameplay may develop.

Kafele Palmer-Hunt

BEng(Hons) Computer Games Design

Ridding the World of Games Piracy Forever

Piracy. It strikes fear into the souls of every games developer. It's one of the greatest threats known to the games industry. It destroys businesses and jobs, and more significantly it's seems unstoppable. Or so it seems.

George Seedhouse-Morton

BSc(Hons) Computer Games Design

http://georgeseedhouse.tumblr.com/

Rigging and Animating a Character for the Unreal Engine

An investigation into the entire animation pipeline for a stylized character. This includes rigging, animation and engine implementation. The aim is not only to understand how the process works but how it can be achieved in a variety of different methods.
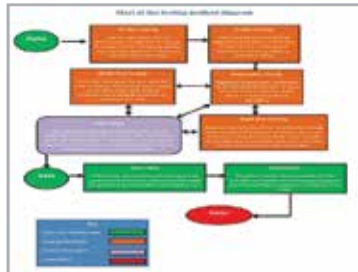

Simon Siddall

BSc(Hons) Computer Games Design

An Example of a Quest within a Role Playing Game

This project will be using the Neverwinter nights toolset to make an example of a quest in it for people to play and this has been built from the research done within the project, the quest should only take ten or fifteen minutes to complete.

Manpreet Sidhu

BEng(Hons) Computer Gameplay Design and Production

Developing a Methodology for Embedded Gameplay Testing

A diagram to show different testing methods used at different stages of game production to test gameplay mechanics.

Lewis Underhill

BEng(Hons) Computer Games Design

Real World to Tabletop

The goal of this project is to create a tabletop air combat game which strikes a balance between realistic mechanics and ease of play. The game takes key elements of air combat such as G forces, energy management and deflection shooting, and incorporates them into a game that is easy to learn, but hard to master.

Jasmine Walsh

BSc(Hons) Computer Games Design

keyboardkitten.blogspot.co.uk

A Game for Cats

Creating an effective game designed for cats.

Games Design and Production

Stafford 23rd May

Christopher Weavill

BSc(Hons) Computer Games Design and Programming

www.linkedin.com/pub/chris-weavill/82/b10/626

Bridges of Communication

People are the work force to making anything in life. If people are managed correctly and efficiently anything is possible. I have researched, analysed and created new frameworks for management of people, production and scrum in industry, to maximize possible potential, save time and money and still make great products!

Nicholas Westwood

BSc(Hons) Computer Gameplay Design and Production

http://nickwdesign.blogspot.co.uk/

Researching Characters and Narrative in Story Driven Games

Using research from books, magazines, and games, I created a short playable demo to demonstrate how to make interesting characters and narrative using the techniques i had researched. By combining the game play, graphics, story and music I hope I have achieved my vision of creating an engrossing story driven game.

Reece White

BSc(Hons) Computer Gameplay Design and Production

Pages - A Literary Themed Card Game

"Pages" is an analogue card game based on literary characters and stories that appear in classic novels and poetry.
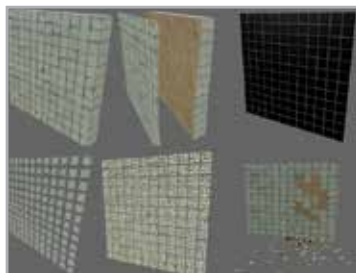
Games Modelling

Andrew Bishop

BSc(Hons) Computer Games Design

http://stormandy.blogspot.co.uk/

Developing Modular Environments for Real-Time Strategy Games

The project both explores and demonstrates how existing real-time strategy games create their environments and creates an environment which utilises the techniques learnt were applicable.

Luke Brady

BSc(Hons) Computer Games Design

lukemarkbrady.com

Research and Practice of Destructible Environments

A look into the current use of destructible environments in games along with presenting a playable scene showcasing the use of techniques.

Mathew Brereton

BSc(Hons) Computer Gameplay Design and Production

Re-imagining an 8-bit Game to 3D

The project is based around re-imagining an 8-bit environment to 3D with a new art style, in a similar manner to Mickey's Mystic Castle. For this project the game chosen is the original Pokemon Red/Blue, an environment from this game will be remade in 3D using a hand painted art style.

Alexander T H Browne

BSc(Hons) Computer Games Design

www.brownetowne.com

Digitally Sculpting Clothing and Accessories

This is a character art project focusing on the sculpting of clothing and accessories. The finished product is a completed character model in a post-apocalyptic style. Special attention has been given to the high poly sculpt of the character and accessories, this has helped to create a detailed realistic character.

Mark Burrows

BEng(Hons) Computer Games Design

www.markburrows3d.co.uk

Optimising Aged and Damaged Materials with DirectX 11

A study in to the optimal use of DirectX 11 in regards to the creation of aged and damaged materials within current game engines culminating in a character asset utilising the research and displayed within the Unreal Engine.

Jamie Butler

BEng(Hons) Computer Games Design

Creating Character Concepts from Literature

Creating concept art and a production painting of characters from Koushun Takami's Battle Royale - utilising a workflow based on research into the practices of reputable industry artists such as Syd Mead, J.P Targete and Iain McCaig.

David Croft-Sharland

BEng(Hons) Computer Games Design

http://davidcroftsharland.wordpress.com/

Optimising Character Rendering for Games

Next gen game character production.

Nicholas Duggan

BEng(Hons) Computer Games Design

nicholasduggan.co.uk

Using Modular Design to Create Customisable Characters

Making use of modular character design to create customisable characters for a video game. This project will create a modular character asset which can be used within the HAWKEN online multiplayer game and aims to understand the advantages to character design in this manner.

Games Modelling

Stafford 23rd May

Simon Edwards

BSc(Hons) Computer Games Design

DirectX9 VS DirectX11 Materials for Next Gen Characters

Shaders and character production have improved drastically with the new engines such as UE4, Fox and Snowdrop. These engines have set a new bar for how characters can be displayed. Exploration will show how much improvement can be made to a model using Direct X11 shaders in UDK on a next generation character.
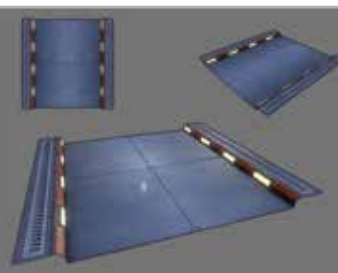
Jonathan Handy

BEng(Hons) Computer Games Design

Creating an Environment Using Modular Techniques

Using modular techniques to create a polished game environment, consisting of custom particle effects and animation. The focus of this project is to maintain polished assets, whilst speeding up workflow with modular techniques.

Charles Hayward

BSc(Hons) Computer Games Design

Creating an Animation Suitable for a Game Engine

The purpose of my project was to create a short animation that would be appropriate for use within a game as a cutscene. The animation was created in 3DS max with the use of free open-source rigs found on the internet. The animation tries to make it clear what the context of the game through the characters interaction.
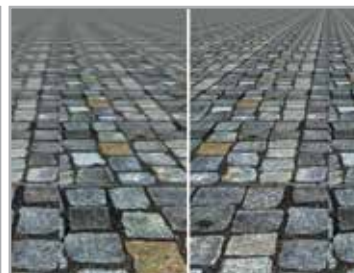
Antony Lucisano

BSc(Hons) Computer Games Design and Programming

Texturing Techniques and Development

A look at the various techniques used in the development of 2D/3D art and how individual situations call for different techniques.

Ryan McGuire

BSc(Hons) Computer Games Design

Advantages of a DX11 Environment

The aim of this project is to demonstrate the technical and visual differences between a DX9 environment, and the same environment created with the help of DX11 techniques, as well as how an environment can benefit more by using the latter.

Daniel Musgrave

BSc(Hons) Computer Games Design

www.danmusgrave.com

An Investigation into Creating a Humanoid Game Character

This project explores the process and techniques used to create a highly detailed space rogue type character to be used within a game. The DirectX 11 feature of sub surface scattering will also be implemented in order to create life like skin, shaders will be created to sell realistic materials such as metals.

Adrian Nantchev

BSc(Hons) Computer Games Design

nantchev.com

Exploration into Creating Hair for a Red Knee Tarantula

Exploring techniques to create hair for Red Knee Tarantula in UDK using industry tools such Fibermesh, Ornatrix and Hair Farm, to emulate the professional pipeline. Involved studying hair to realise how to portray its properties in 3D, intertwined with broadening anatomy knowledge by creating the Tarantula.

Jake Osbaldeston

BEng(Hons) Computer Games Design

www.jakeosbaldeston. portfoliobox.me/final-peices#0

3D Quadruped Animation for Games

A short Feature Animation and game cycles based for a quadruped animal. The Animation will include a walk cycle, run cycle and stand idle animation as well as a small 20 second cinematic.

John Pearson

BSc(Hons) Computer Games Design

www.johnpearson3d.com/

Production of an Environment to Reflect Characters

Creation of an environment to portray rock legends such as Tommy Lee, Gene Simmons and more within a game engine. Scene is set on a stage replicating Donnington Park's renowned Download Festival stage and uses multiple techniques to achieve a scene fitting the calibre of these legends.

Christopher Pendleton

BSc(Hons) Games Technical Art

Cost Effective Motion Capture for Sports Games

An investigation to capturing sports movements for games using motion capture software and equipment that is available to the public as a low cost alternative to the high end systems used by large game companies. With the end result of having the captured motions applied to a character and implemented in a game engine.

Jordan Preston

BSc(Hons) Computer Games Design

www.jordanpreston.co.uk

Production of a Multiplayer Online Battle Arena Character

This project investigates the process behind designing a character for popular MOBA games; exploring relevant production and stylistic techniques with the goal of creating a functional character with a bold and interesting design that is authentic to the genre.

Jack Sharpe

BEng(Hons) Computer Games Programming

Optimal Modular Systems for Medieval Buildings

An interior environment made within UDK from modular assets to recreate an existing medieval church.

Connor Thompson

BSc(Hons) Computer Games Design

www.happypolygons.com

Optimising Modular Character Creation for UDK

This project explores the creation of Modular characters for UDK, utilising eighth generation console techniques. The project has created an optimal framework for modular asset creation. I have utilised this framework to create a unique character, who employs features of Aztec architecture and culture in his design.
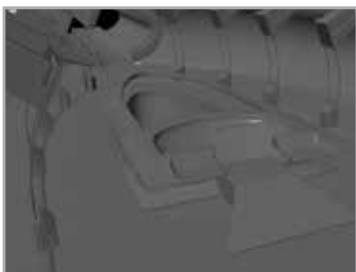
James Vitale

BSc(Hons) Computer Games Design

Texture Reuse in a Modular Sci-fi Environment

A replication of the Normandy SRII Command Center from Mass Effect 3 using only between one and two diffuse textures while keeping the same level of detail as the original.

Benjamin Wright

BSc(Hons) Computer Games Design

www.3DBen.co.uk

Understanding and Implementing Modularity Effectively

This project looks into various methods of creating and using modularity effectively within game environments, as well as its effects on aesthetics, technical performance and production time.

Matthew Wright

BSc(Hons) Computer Games Design

Research into Environment Art Modularity

A project aimed at researching into current uses of environment art modularity and its benefits of use in an environment within a games engine.

Games Programming

Thomas Barnett

BSc(Hons) Computer Games Programming

Destructible Environments in Games Today

In this project I will be demonstrating new techniques in modern games for destructible environments. I will do this by shooting projectiles at an object and then show the destruction in the building.


Lee Booth

BSc(Hons) Computer Games Design and Programming

http://tinymammothgames.wordpress.com/

Optimising Games for Mobile Devices

Researching and implementing various methods of optimisation for handheld devices in order to refine and enhance the mobile gaming experience. This project looks into which options give the best results when trying to speed up a sluggish windows phone 8 application.
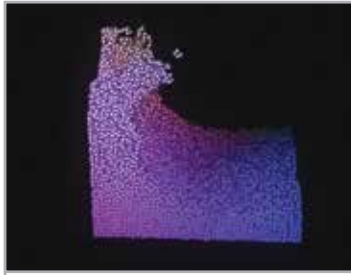
Peter Bradbury

BSc(Hons) Computer Games Programming

Soft Body Particle Simulation using Graphics Acceleration

Creation and manipulation particle based systems which are visualized using mesh generation techniques and rendered with DirectX. This is to be implemented with graphics acceleration utilizing parallel programming methodologies.

An Early Useablity/Scale Prototype
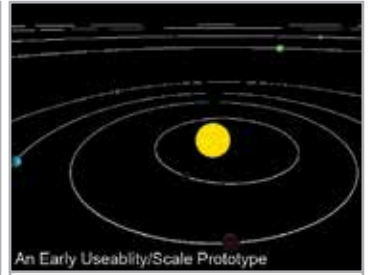
Jonathon Butler

BSc(Hons) Computer Games Programming

Procedurally Generated Solar Systems

To create an artefact capable of producing full scale 3D solar systems using procedural generation techniques, the project will attempt to generate textures and meshes to make each body unique, while also focusing on the issues of rendering such a large 3D world and the ability of the end user to navigate that world.

Simon Clark

BSc(Hons) Computer Games Programming

An XNA-based Implementation of Randomly Generated 3D Terrain

This project involves the research, implementation and testing of 3D Terrain Generation techniques. The implementation involves an application that can create and render 3D terrain on request. 3D Terrain Generation can be used for a variety of purposes - the primary example being dynamic gaming experiences.


Michael Crumpton

BSc(Hons) Computer Games Programming

Scalable Dynamic Aim Assist

Aim assist systems in console first person shooters are necessary to make the game enjoyable for players of different skill levels. This project aims to overcome limitations of some current systems by demonstrating an intelligent, scaling and dynamic aim assist system determined by the players aiming ability.
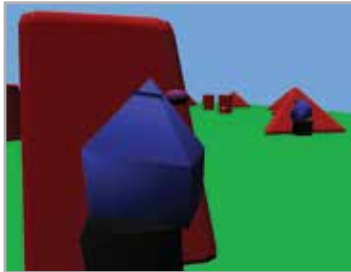
Jack Davenport

BSc(Hons) Computer Games Programming

AI for Paintball Game

For a team of AI agents to excel in competitive paintball they will face additional challenges to those in classic shooter games. A large emphasis will be placed on survival through gunfight and movement logic along with dynamic role allocation to allow the agents to work collaboratively in an ever changing scenario.


Joao Duarte

BSc(Hons) Computer Games Programming

Physics Deconstructed

My project is an analysis of current physics techniques, with an emphasis on the application of force systems, and the objects therein, and the interactions between these, especially tension and elasticity. Together with the research, a piece of software demonstrating these principles in practice was also produced.

Games Programming
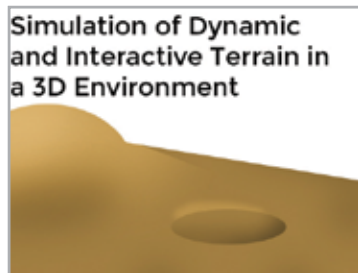
Nicholas Edwards

BSc(Hons) Computer Games Programming

http://www.olodo.net

Simulation of Dynamic and Interactive Terrain in 3D

This project aims to fill the niche of dynamic and interactive terrain in games. In most games, terrain remains static throughout, while characters, objects, and, more recently, buildings are able to be manipulated in real-time. This project will help make terrain an active component in gameplay.
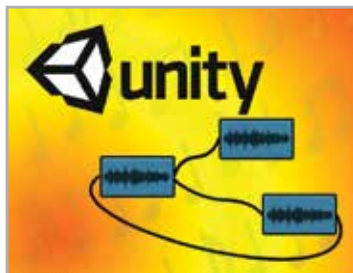
Ryan Fawcett

BSc(Hons) Games Audio Design

Implementing a Dynamic Music System in Unity

The purpose of this project is to implement a dynamic music system in the Unity engine (using C#), allowing the user to define how music interacts with the events happening within the game. Primarily this is to provide a feature which, as of yet has no real analogue within Unity's existing features.
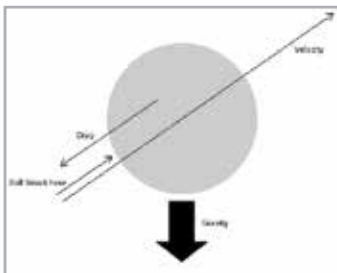
Lee Ford

BSc(Hons) Computer Games Programming

Sports Ball Physics Simulator

My implementation will be a visual representation of how different sports balls move in 3D space realistically, with the user able to change different variables (e.g. wind speed, spin, location of ball struck). Depending on these variables the ball's movement will be calculated and move realistically on the screen.

Jason Harmon

BSc(Hons) Computer Games Programming

www.jasonharmon.co.uk

Lag Reduction in Multiplayer Racing Games

Can you have a fair and consistent racing game with a laggy connection? This project investigates potential methods and puts the best to the test.

Kyle Hawkes

BSc(Hons) Computer Games Design and Programming

http://kfdhawkes.wordpress.com/

Dynamic Wildlife AI Generation & Adaptation

Designing and implementing a system to intelligently create AI wildlife based on its surroundings, generating all of its stats and behaviours based on what would allow it to survive in that environment with no preset static archetypes being used, adding a huge potential layer of depth to modern videogames.

Nathyn Haywood

BSc(Hons) Computer Games Programming

Collaborative and Individual AI in a Space RTS Setting

Investigation and implementation of collaborative and individual AI in a 2D space setting where space pilots will work towards their own goals, make relationships with other pilots and thrive.

Richard Hodge

BSc(Hons) Multiplayer Online Games Programming

Investigation into Player Scaling in Online Gaming Systems

Playing online is becoming a vital part of games today. This project investigates the effects of a large number of players on a single game, and explores methods of reducing the negative effects.

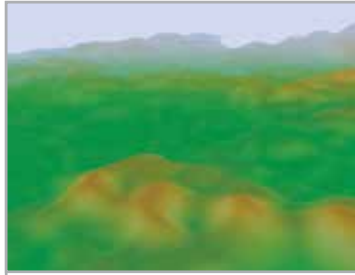## Lianne Hutt

BSc(Hons) Computing Science

LianneHutt.co.uk

A Real Time Weather System for Use in Games

A weather system which will use real time weather data to create a weather system which will graphically simulate the weather in the user's local area. This could be used in games to improve the level of game immersion.

Games Programming

Benjamin Johnson

BSc(Hons) Computer Games Programming

Dynamic Pathfinding on Random Terrain

This project looks at, and implements, efficient and swift methods of calculating paths over a massively randomly generated terrain that can be dynamically altered, with the path being recalculated on the fly.
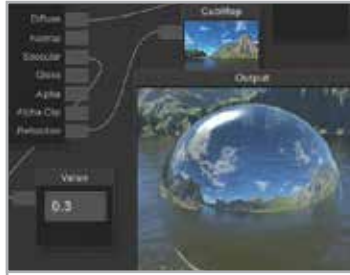

Ryan Lee

BSc(Hons) Computer Games Programming

anzerou.wordpress.com

Fluid Physics/Dynamics

Artefact to demonstrate fluid physics/dynamics.

Tristam Newbury

BSc(Hons) Computer Games Programming

www.epicbite.com

A Visual Shader Editor

A development tool for the creation of visual effects (shaders) using an editor rather than coding them in the standard textual form.

Penny Paton

BSc(Hons) [Top up] Software Engineering

2D Roleplaying Game

A 2D RPG featuring artificial intelligence concepts in pathfinding and enemies, and randomised map generation along with various levels to progress through.

David Pountney

BSc(Hons) Computer Games Programming

Simulating a Global Economy for Strategy Games

A global economy - with macro-economics and micro-economics such as inflation, supply and demand, unemployment, economies of scale, international trade tariffs and more.
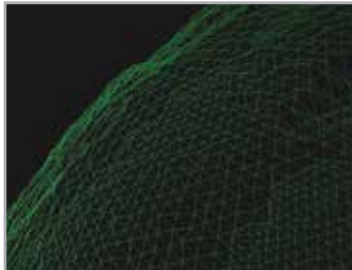
John Sibson

BSc(Hons) [Top up] Computer Games Programming

Procedural Terrain Generation for Virtual Worlds

An investigation into techniques available for the procedural generation and management of terrain detail within a virtual environment, and methods of adapting selected techniques to produce spherical worlds with reproducible terrain.


Phillip Smith

BEng(Hons) Computer Games Programming

Programming Techniques to Reduce Simulation Sickness

Investigating how programming techniques can reduce simulation sickness, with the aim to create a piece of software that can show how different techniques can effect simulation sickness, and gauge how susceptible a user is to to the effects and help determine if a user is suitable for virtual reality training.
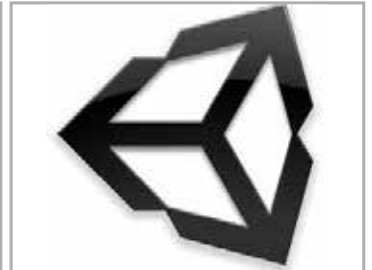
Gregory Stephens

BSc(Hons) Computer Games Programming

Interactive 3D Graphics for Autonomous Car Software

Autonomous cars are on the horizon and software is needed to aid in the research of intelligent cars. My project is all about creating the realistic visuals needed for such software. By using the Unity Engine and advanced graphical rendering techniques, high definition environments can be processed and rendered.

Games Programming

Stafford 23rd May

Harry Stevenson

BEng (Hons) Computer Games Programming

Playing Video Games with Cloud Computing

This project is aimed at identifying the viability of using clustered, cloud hosted low powered computers to compute and stream video games to a range of consumer devices.

James Sunerton

BSc(Hons) Computer Games Programming

Realistic Weather Effects upon Characters and Environments

Think of a game in which the environment is affected by the weather. There aren't many are there? Weather has very often been a purely visual enhancement in the game world, but now you can experience weather effects that physically impact their surrounding environments and have a knock on effect for the characters.

James Tooley

BSc(Hons) Computer Games Programming

Multiplayer, Multi Peripheral PC Gaming

This project is a technical research effort looking into why PC games rarely have the functionality to be played similarly to console games where it is possible to plug in multiple peripheral devices and play games in a local session despite PCs often having superior hardware.

William Man-Kit Tsoi

BSc(Hons) Game Artificial Intelligence

www.linkedin.com/pub/william-tsoi/90/b80/823

The Overmind - a Self-adapting RTS AI

The Overmind is an RTS AI that learns the game. To give you the best possible gameplay experience, not only will it be capable of learning new strategies and adjusting its own difficulty to match yours; it will also adapt and use new units and strategies introduced into the game without further programing.

Richard Whitlock

BSc(Hons) Computer Science

Bandwidth Reduction Techniques in Networked Games

A networked application to demonstrate the effectiveness of certain bandwidth and latency reduction techniques in networked games and the negative impact not implementing them can have on the game-play experience of the players.

Peter Why

BSc(Hons) Computer Games Design and Programming

http://ptrwhy.com

Real-Time Live Game Update Framework

This project is the creation of a framework that allows for the distribution and integration of content into a game whilst the game is actively being played. This allows players to continue playing their game whilst it updates, integrating new content and bug fixes without the player loosing immersion.
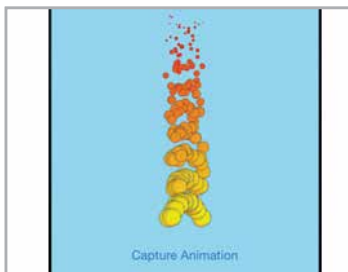
Blain Ellis

BEngHons Computer Games Programming

Development of a Particle Simulator for a Mobile Device

This project is a particle system developed for the iOS platform; it allows the flexible creation of various particle emitters whilst taking advantage of current smart phone technology such as the touch features and the accelerometer.

Kwame Aboagye

BSc(Hons) Mathematics with Applied Statistics

I Know if You Go to the Gym

This project investigates the factors that influence whether an individual will become a gym member. Data was collected through the use of a survey and analyzed using statistical methods such as logistic regression to find the most influential factors.

William Clapp

BSc(Hons) Mathematics with Applied Statistics

Britain's Bursting Banks

To forecast flooding, relationships have to be derived between rainfall over a catchment area, and the resulting flow in a river. This is an inexact science, and so by methods of empirical analysis a conceptual model is formed to simulate this relationship with reasonable accuracy for the River Sow, Stafford.
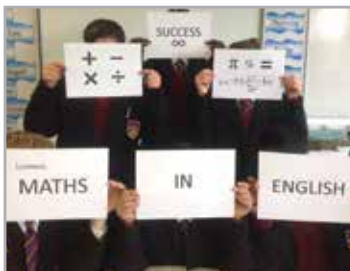
Deveshwar Dogra

BSc(Hons) Mathematics with Applied Statistics

Learning Mathematics in English

Language plays a vital role in a person's learning, whether it is learning a new subject for the first time or even learning a new language. This study shows the effect that language can have in a mathematical context for students learning English as an additional language (EAL).

Chantel Givans

BSc(Hons) Mathematics with Applied Statistics

Can We Change the Future of Breast Cancer?

Understanding the impact our lifestyle has upon our bodies can help to prevent some of the most common diseases such as Breast Cancer. A model of the incidence rates alongside the affecting factors can give an insight into the process of reducing the prevalence of the disease.

Victoria Hepburn

BSc(Hons) Mathematics with Applied Statistics

A Country with No Religion

The 2011 UK Census revealed a decrease in some religious denominations and an increase in others as well as in those having no religion. This project uses a range of statistical techniques to analyse data collected from English University students to investigate their attitude towards Religion.

Tanzim Hussain

BSc(Hons) Mathematics with Applied Statistics

Malaria: Maths Bites Back!

An insight into the mathematical models used for simulating the spread of a disease. This includes an investigation into the effect of malaria on population systems and an attempt to create an accurate simulation of the system using mathematical modelling software.

James Leese

BSc(Hons) Mathematics with Applied Statistics

How to Win at Blackjack!

This project aims to develop a strategy that will improve a person's ability to win a game of blackjack. The strategy will be developed by creating an accurate model of the game and then running simulations to see observe how altering a variable results in the players chance of winning changing.
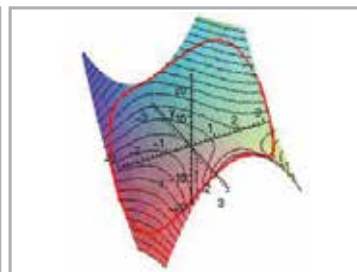
Heather Mitchell

BSc(Hons) Mathematics with Applied Statistics

Mathematics Lecture

This project is about how maths students in HE learn Mathematics, and whether being introduced to the history and background to a mathematician will encourage learning. In this case the Mathematician is Joseph Louis Lagrange. This is placed into a lecture and it is proposed to also provide a supporting learning aid.

Mathmatics and Applied Statistics

Stafford 23rd May

James Murray

BSc(Hons) Mathematics with Applied Statistics

Predicting Football Outcomes Using a Statistical Model

Using computer software in order to develop a mathematical model to determine the outcome of a football match. Past data will be used to analyse any trends that may be present in order to determine the most likely winner of an upcoming match.

Ji-Hyun Park

BSc(Hons) Mathematics with Applied Statistics

Experiments to Investigate Buttered Toast Falling

We all have experience of dropping buttered toast and every time facing the floor side appear to be the buttered side of toast. This report aims to design and conduct experiments to investigate buttered toast phenomenon and determine the factors that might affect it.

Matthew Prinold

BSc(Hons) Mathematics with Applied Statistics

A Model of the Hypersonic Re-Entry of a Space Shuttle

The development of a mathematical model and a simulation model that describes the behaviour of a space shuttle through the process of atmospheric re-entry through the earth's atmosphere, with the aim of investigating the effects upon the re-entry process when the initial velocity becomes hypersonic.

Yong Wang

BSc(Hons) Mathematics with Applied Statistics

Investigating a Clinical Trial about Acupuncture on Migraine

This study investigates the procedure of conducting clinical trial using a randomized clinical trial of acupuncture treatment on chronic headache and migraine. With the limited availability of raw data on clinical trials, the exploration will focus on a particular open source data set which resulted from a study in 2004.

Alan Witherden

BSc(Hons) Mathematics with Applied Statistics

Historical Skirmish Model

This simulation applies probabilistic modelling to pit small units of warriors from throughout history against one another to determine which group had the greatest fighters. If used with modern day soldiers this would make a modern wartime simulator.

Daniel Wolverton

BSc(Hons) Mathematics with Applied Statistics

Analysis of Football Season Ticket Prices in England

Season after season the price of purchasing a season ticket for football fans seems to be on the rise despite the increased commercialization of the game especially in England. This project aims to investigate some of the factors behind the pricing of season tickets in English football.

Music

Stafford 23rd May

Sarah-Beth Campbell

BSc(Hons) Music Technology

The Design and Construction of a Car Sound System

This project is to design and build a sound system within a car that has a broad frequency response and widespread audio coverage. This sound system is to acoustically exceed the previous system.

Shane Gravestock

BSc(Hons) Music Technology

www.shanegravestock.co.uk

Film Sound and Foley for a Short Film

An investigation into technology for the use of film sound and Foley. Along with a portfolio piece that includes the recording, editing, mixing and mastering of the sound and Foley to a short film.

Robert McQuaide

BSc(Hons) Music Technology

Helmholtz Resonator

My project involves using recording studio acoustic techniques in the working factory environment in order to reduce noise at work by reducing the sound pressure level of a particular frequency.

Daniel Milner

BSc(Hons) Music Technology with Film Production

Sound Design for Film

The creation of sound effects, Foley, ADR and ambience are explored within this project. This includes recording methods, the use of samples and synthesis and plug-ins. This is all mixed in Pro Tools and presented in 5.1 surround sound, accompanying the short film 'The Gift'.

James Milner

BSc(Hons) Music Technology with Management

Marketing and Promotion Techniques in the Music Industry

The marketing process is an important part of creating and selling a product. There are many different elements involved within marketing and this project aims to identify and implement some of the techniques commonly used. In order to show these techniques in a practical way, they will be used to promote a local DJ.

Chanita Randolph-Clarke

BSc(Hons) Music Technology

Investigation into Sound Design Styles for Animation Film

This project explores the processes taken into re-designing all sound elements for animation film, such as Foley, Music and Sound Effects.

Natalie Stephens

BSc(Hons) Creative Music Technology

Developing an Independent Record Label within the Digital Age

Looking at a number of ways rebrand, market, promote and release artists/bands work from an independent record label (digitally).

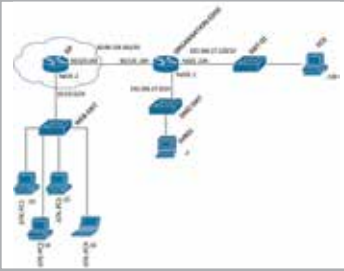## Dale Trayers

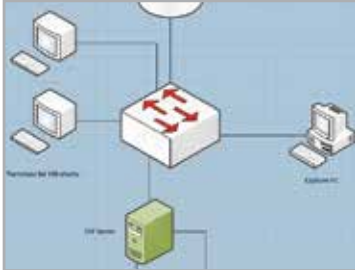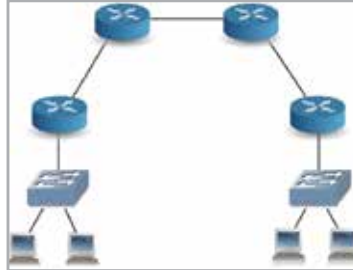**BSc(Hons) Music Technology**

http://dtsound.webs.com/

Sound Design for a Short Animated Film

This project is concerned with creating, mixing and mastering the audio elements for a short animated film. These elements consist of Foley, effects, ambience and music. There is also an emphasis on the use of convolution reverb, implementing bespoke impulse response recordings, to enhance the realism of the piece.

Networks, Security and Forensic Computing

Stafford 23rd May

Nouriddeen Abdulaziz

BEng(Hons) Computer Networks and Security

Investigation on how IP CCTV Affects Networks Performance

This investigation aims to analyse the impact of implementing an IP CCTV surveillance system on corporate network's performance and reliability. Through extensive research and testing, the investigation will use different methods in order for an IP CCTV system to be safely implemented.

Richard Bodinar

BSc(Hons) Computer Networks and Security

Improving and Maintaining High Quality Voice Traffic

The project contains research based upon how VoIP traffic is handled within a network, it also discusses and evaluates QoS measures that can be implemented to ensure that calls made are of the best quality and are not dropped when available bandwidth is reduced across the medium.

Greg Borg

BSc(Hons) Computer Networks and Security

Analysis of WAN Optimization Techniques

An analysis and comparison of multiple Wide Area Network (WAN) optimization techniques that can be used to speed up a network and how efficient they can be handling multiple types of network traffic.

Kenneth Bradley

BSc(Hons) Computer Networks and Security

tinyurl.com/k-sbradley

The Integrity and Security of a Demilitarized Zone

The inspiration for this project was the network I dealt with whilst on my 3rd year placement. During this project, key elements of the network have been replicated and security testing has been carried out on a web server. Furthermore, the network has been redesigned to incorporate a DMZ and further testing completed.

Daniel Clarke

BSc(Hons) Computer Networks and Security

tinyurl.com/daniel-clarke

Does the Conversion between IPv4 and IPv6 Affect Multicast?

The aims of this project are to measure affecting factors on multicast packets while being transitioned from an IPv4 network across an IPv6 network. The reason for using IPv6 in this project is down to the change occurring within internet service providers from IPv4 to the newer IPv6 addressing scheme.

Christopher Edwards

BSc(Hons) [Top up] Network Computing

Investigating the Effect of Virtualisation in a Network

This project will Investigate the effect of virtualisation in a computer network, by comparing different hypervisors with a conventional computer network to find which has the best network throughput performance on a computer network.

Ricco Heera

BSc(Hons) Computing Science

An Incident Response Tool for File Examination

With cybercrime increasingly on the rise and computer technology ever-changing, it is important to stay one step ahead of criminals who continue to devise new methods in order to commit an offence. This software artefact aims to help by scanning any file to detect changes made before flagging them up to the user.

David Hunt

BEng(Hons) Computer Networks and Security

www.djhunt.co.uk

Delay and Latency within VPN and Non-VPN Networks

This research project is to discover the performance differences of delay, jitter and HTTP when using different VPN technologies that are currently available and widely used in the industry, and discover which type of VPN technology is best used in different situations.

Networks, Security and Forensic Computing

Stefan Kelly

BSc(Hons) Computer Networks and Security

A Comparison of IPv4 and IPv6 Security Flaws and Features

This project is researching dual stack internet protocols, specifically the security flaws and attacks that they are vulnerable to.

Christopher Kirk

BSc(Hons) Network Computing

Investigation into Security of IP CCTV on a Shared Network

The use of IP networks for CCTV systems is becoming more and more common due to reduced cost and increased features. This investigation looks at the security provided to IP based CCTV systems, the effect this has on performance and compares the available security to that of analogue CCTV systems.

Michael Littler

BSc(Hons) Digital Forensics

A Tool to Detect Image Steganography

A tool will be designed and implemented to detect stenography within a certain image file type. The tool will provide a hash value for the image and will use steganalysis techniques to determine if an image has a hidden message within it.
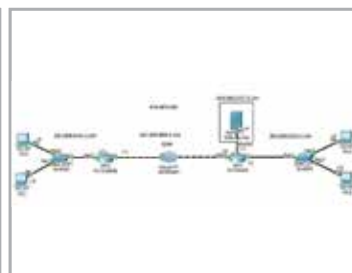
Namiti Lyembela

BSc(Hons) Computer Networks and Security

http://www.linkedin.com/pub/namiti-lyembela/60/54/46a

Testing of DOS attacks against Firewalls

This project looks at various firewall technologies and denial of service attacks which specifically target web server. It then goes on to launch the chosen dos attacks against the different firewall technologies and analyses the results to compare the best firewall practice against web server specified DOS attacks.

Andrew McGuigan

BSc(Hons) Computer Networks and Security

Investigating Secure Communications between Remote Locations

An investigation of the advantages and disadvantages of a Virtual Private Network compared to a 'leased line' connection and the benefits and constraints of a Virtual Private Network being utilised on a leased line.

Siyakha Njabuliso Mthunzi

BEng(Hons) Computer Networks and Security

Cloud-enabled Dig Forensic Investigation on Multiple Devices

A Framework Cloud-enabled Digital Forensic Investigation on multiple devices will improve the scope & pace of an investigation. A parallel processing & analysis system ingests data from a set of different but linked devices, analyses & output the evidence in a central repository accessible to authorized personnel.

Sundeep Rarwala

BSc(Hons) Network Computing

Future of Computer Networks Routing - IPv6

IPv6 is the latest internet protocol developed to date which will eventually replace the widely known used IPv6. IPv6 covers a lot of different areas within technology, this project focuses on and investigates IPv6 routing giving the benefits of IPv6 routing and comparison between IPv6 and IPv4.
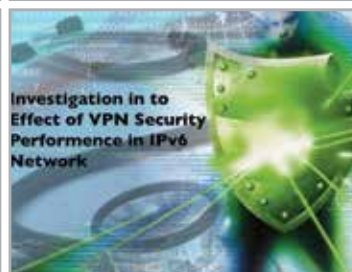
Babak Taklimi

BEng(Hons) Computer Networks and Security

Investigation in VPN security Performance in IPv6

Deep understanding of IPv6 addressing scheme and knowledge of related protocols and creating a critical and analysis report. In some cases IP Telephony is essential to enterprises, so the effect of VoIP in VPN design is part of this investigation. Implementing the reasonable Network topology.

Networks, Security and Forensic Computing

Stafford 23rd May

James Tatlow

BSc(Hons) Network Computing

uk.linkedin.com/pub/james-tatlow/65/545/8b1/

The Effects of Quality of Service on a Corporate Network

A project based around the effects of Quality of Service on a corporate network due to the increasing use of multimedia services and reliance on computers within the corporate environment. The project researches the effects of this extra usage and the effects different Quality of Service solutions have on the issue.

Kyle Whitney

BSc(Hons) Network Computing

Performance Analysis of a Beowulf Cluster for SME

A study to discover if the use of a Beowulf cluster in a small environment can produce positive results and enough so that it is useful for small businesses and independent companies.
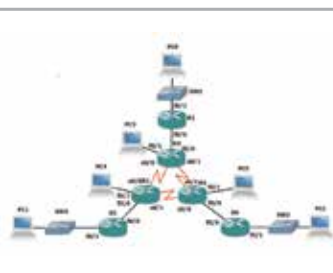
Toby Winfield

BSc(Hons) Computer Networks and Security

Creating Reliability in a UDP Based P2P Network

This project attempts to increase reliability in a UDP based P2P system through the use of a lightweight proxy server. (Full Title: Creating Reliability in a UDP Based P2P Network using Server Based Redundancy).

Abida Zarin

BEng(Hons) Digital Forensics

QR Code Reader

The project is designed to read a QR code by using a mobile phone camera. As the use of QR codes are increasing as a forensic investigator it would be necessary to examine/recover the text, URL and any other application embedded.

Aikaterini Flokali

BSc(Hons) Digital Forensics

Recovering a Snapchat Image

This is a Final Year Project in which I will be investigating the possibility on retrieving an image from a web based application (Snapchat) using forensic tools.

Web and Multimedia

Stafford 23rd May

Christopher Allan

BSc(Hons) [Top up] Multimedia Computing

Espionage: An Interactive Video Story

This project's artefact is an interactive video story, it hopes to provide evidence to support the idea behind this project of a piece of entertainment hardware/software inside of a waiting areas to relieve boredom.

Haroon Arshad

BSc(Hons) Web Development

Web Based Appointment/Prescription System for GP Practices

The system is double ended meaning it will be a system for both members and staff. Members of the practice will be able to book appointments, order repeat prescriptions, check blood test results etc. Staff will be able to login, check schedules as well as specify when they are available.

Alan Autrey

BSc(Hons) [Top up] Multimedia Computing

Hands off Cooking

An instructional cookery application that makes use of wireless gesture control. A number of different cookery tutorials will be presented using a variety of media. The user will then be able to control these tutorials as they prepare their food without having to touch a device.

Anthony Bates

BSc(Hons) [Top up] Web Development

www.anthony-bates-web-design.co.uk

Real Estate Management System Web Application

This software is a web based Real Estate Management System built upon the Wordpress Web Application Framework. It allows Agents to manage information for Customers, Products and Employees.The application works without any installation and is made purely in HTML5, CSS, PHP and JavaScript.

Daniel Boyle

BSc(Hons) Multimedia Computing

Augmented Reality Card Dueling System

Project adding visual stimulation to card dualing. Includes monsters and health points. Card games like Magic the Gathering, Pok mon and Yu-Gi-Oh have gained a competitive following. However they are not easily followed by spectators. This project's aim was to change that.

Craig Bucklow

BSc(Hons) Web Development

www.craigbucklow.com

Increasing the Efficiency of Shopping Through Mobile Web

This project investigates how the use of Mobile Web can be used to increase the efficiency of a grocery shop. Shopping can be time consuming for customers because of poor signage, changes to store presentation and staff presence. A Mobile Web Applications could be used to confront these issues and help customers.

Oliver Daley

BSc(Hons) Multimedia Computing

www.oliverbrammer.com

Creation of an Interactive Video

The creation of an Interactive music video using HTML5 and CSS effects to engage the user in a completely different approach to how a music video portrays the meaning of its supporting Sound Track.

Adam Di Libero

BSc(Hons) [Top up] Web Development

Amalgamating Social Networks and Personalised Information

Wouldn't it be good if you no longer had to visit multiple social networks to view all of your content? Would you prefer just one place? Now you can with this project allowing you to log into all of your social networks and have one feed with all of your content!

Web and Multimedia

Stafford 23rd May

James Dowell

BSc(Hons) Web Development

Tekkrs - Real-time Football Pools Application

Tekkrs is a safe, online, social betting community that allows users to predict the results of real life football games. Users place wagers on their prediction, competing with others in private or public leagues. Utilising real-time technologies, Tekkrs provides a stream of live data updating players scores on the fly.

Matthew Fennell

BSc(Hons) Web Design

mindermom.com

MinderMom Hybrid Android Application

MinderMom is a 'virtual babysitter'; allowing parents to leave their teenage child at home, without having to worry about safety or security. Features include a map showing the teenagers' location, the ability for parents to create memos, quick call numbers and set an estimated time home, all viewable by the teenager.

Andrew Fishwick

BSc(Hons) Web Development

www.afishwick.com

Student Attendance Management System using NFC

A centralised student management system utilising Near Field Communication and Web Technologies that aims to reduce time spent recording and monitoring student attendance. The system also provides a communication channel for students and lecturers to solve any problems that may arise, related to academia or attendance.

Andrew Frost

BSc(Hons) Web Development

www.navimate.co.uk

Web Based Interactive Map

An indoor interactive map which aids users to navigate their way through buildings. The map calculates the shortest distance between two points and provides detailed information on each room inside the building. The map makes use of NFC and QR codes to determine the users starting location.

Michael Gane

BSc(Hons) Web Development

www.ganey.co.uk

Web Based Golf Membership Management System

A web based system that can be used to manage membership accounts and grant access to services via authentication methods such as RFID.

Michael Gooch

BSc(Hons) Web Design

Student Accommodation Finder

The project will look into current issues in finding accommodation and friendship groups whilst at University. Research will be done into how to appropriately design and implement a website to offer such a service. The website will be created following the designs using techniques and methods appropriate to do this.

Sam Gwilliam

BSc(Hons) Web Development

www.gwilliamdesign.co.uk

Android Gym Application Using NFC Technologies

TitanTrackr is a new gym application allowing user to quickly scan and save their workout information. The android application receives data from Near Field Communication (NFC) tags and then stores it in a central database that can be accessed with the web app.

Alastair Herd

BSc(Hons) Web Development

www.alastairherd.com

Investigation into User Experience

This project will explore editing video clips within the browser. The main theme will be focused around Staffordshire University's graduation ceremony. User Experience will be one of the main focuses of the project, alongside making the application available across many different devices.

Web and Multimedia

Stafford 23rd May

Kate Hills

BSc(Hons) Web Design

www.webdesignerkate.co.uk

Use of Web Technologies in a Cross-device Interactive Book

The investigation into the use of web technologies in cross-device interactive storybook shows how animations and interactivity can be created with the use of CSS3 and JQuery to allow for cross-device compatibility.

Steven Jefferson

BSc(Hons) Web Development

Character Recognition Technology Made from Web Technologies

This project looks at the current technologies of the web in order to extract letters and numbers from a photo taken by a smartphone (this is known as OCR Technology). The project is based around an agricultural system which uses OCR to detect animal ID's to allow farmers to manipulate animal records "in the field".

Lukasz Kasprzykowski

BSc(Hons) Web Programming

http://fyp-lucas.azurewebsites.net/

Online Map Creator Tool

A sample project, demonstrating how most modern web technologies allow many users to work in the same area at the same time. For software companies creating branches worldwide, centralised tools of any nature will be in demand to overcome the logistics factor. OMCT demonstrates the capabilities of such technologies.

Michael Katende

BSc(Hons) Business Computing

www.revision-with-cohesion.tk

Past Examination Papers and Solutions Access Tool

The project is aiming at improving students' exam performance through an online access to past exam materials other than having to ask for them from the faculty, provide exam techniques as well as marking guides and possible solutions. This will make students aware of common exam mistakes and how to avoid them.

Thomas Kenning

BSc(Hons) Web Design

tomkenning.com

Website for Adults Living With a Long Term Medical Condition

User-centred approach to developing a website for adults with a long term medical condition. This project aims to involve the users in every stage of the development process in order to produce a website that is specifically tailored to their needs and is more suited to them than current websites about their condition.

Gagandeep Kurl

BSc(Hons) Multimedia Computing

The Development of a Multimedia Application for Tourism

The project aims to use Windows 8 as a platform for developing a rich front-end multimedia experience for Windows Phone 8 Smartphone users within the context of Tourism and Mobility.

Paul Machin

BSc(Hons) Applied Information Technology

Online Game AID

This web application is a play aid for a tabletop game called A Call To Arms Star Fleet, Based on the TV series Star Trek, the application aids players, in setting up a game and keeping track of the ships statistics such as, damage or weapons throughout the game.

Muhammad Muhaymin

BSc(Hons) Computing Science

Web Based Academic Staff Time Management System

A strategic academic time management system for senior staff in the School of Computing. For analysis of academic and cross academic work profiles for decision making on staff resource by analysing staff timesheets and the time they spend across a variety of high-level activities from teaching, research and enterprise.

Web and Multimedia

Stafford 23rd May

Jamie Oliver

BSc(Hons) Applied Computing

http://www.alpha-lite.co.uk

An Empirical Study on Product Layout - Time vs Satisfaction

To identify, for the development of a usability framework, whether the placement of products on an ecommerce website affects the level of satisfaction that the user experiences; and whether or not the satisfaction score is influenced by the amount of time that a user takes to complete a purchase.

Neil Parsons

BSc(Hons) [Top up] Web Development

Fun Photography Prints Online

Fun Photography prints online, allows companies and the general public to search and purchase high-quality images. This will be done via a monthly membership, which then allows access to all features of the site. This application is a fun, easy to use and interactive way of browsing photographs online.

Nicholas Patrick

BSc(Hons) Web Development

www.nick-patrick.co.uk

Real-time Fleet Management and Tracking for Android Devices

Driver management and real-time tracking using location based services with analytic reporting to allow greater control over a growing fleet of vehicles. The project includes an Android application to provide direct communications between management and drivers.

Lee Percox

BSc(Hons) Web Development

A Prototype Collaborative Development Suite

ProCol aims to assist development teams with tracking and giving support to clients on projects. Teams can do regular task management operations, source code control, blog management, support desk and more whilst remaining in a social collaborative environment and allowing management to track staff activity/operations.

Luke Roberts

BSc(Hons) [Top up] Web Development

lukeroberts.me

A Better Web Experience

This project aims to re-envision an outdated British Computer Society (BCS) run website containing impeccable content with poor execution methods. Responsive web design techniques continue to undeniably be the future of the web with users avid need for ubiquitous, scalable content, and modern design.

Nicholas Roberts

BSc(Hons) Web Design

www.nickroberts.biz

Fresher's Guide to Staffordshire University

An interactive guide to Staffordshire University's campuses, allowing freshers, potential students, and visitors to find directions to the University, and locate parts of the campus on easy to use, informative maps. The website also includes a Frequently Asked Questions page and useful information for students.

James Robertson

BScHons) Web Programming

www.jscr01.co.uk

Easy Web: A Content Management System for Easy Read

Easy Web is designed to make creating easy read websites and documentation for people with learning disabilities (LD) simple, quick and easy. Easy read is a format that makes information accessible for people with LD. Easy Web makes it easy for the user to make Easy Read websites and documents with a click of a button.

Kate Salsbury

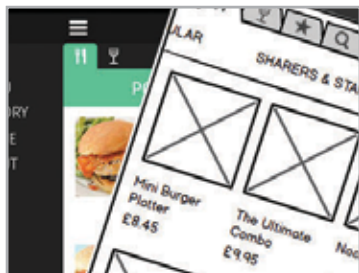**BSc(Hons) Web Design**

http://katesguides.com/wp

Guidance for Professionals in Designing Websites

A guidance website created for professionals having an involvement in the design and content of a website, where the audience suffers from some form of disability. The main site gives advice on design layouts. There is a link to an Estate Agent website designed with the considerations outlined in the guidance sheets.

Web and Multimedia

Dawn Taroni

BSc(Hons) Web Development

http://inoratdawn.com

A Menu Ordering System, with an Emphasis on User Experience

Mobile devices are having a transformational impact on how we live, work and communicate. This project explores and enhances the user experience of using a mobile device to efficiently select product items and place an order, using a self-service approach in a pub or restaurant environment.

Matthew Votsikas

BSc(Hons) Web Development

votsikas.com

Web Service to Create, Edit and View Real World 3D Models

A simple web service that includes a RESTful API and JavaScript library to scan 3D models from photos (e.g. from a smartphone), an API to edit 3D models and a JavaScript library to explore 3D models, providing an easy way to integrate 3D modelling functionality into any website.

Miles Wilcox

BSc(Hons) Web Design

Away-Fans.co.uk

Away-Fans.co.uk has been developed for fans of Football League clubs who are visiting away grounds. Features include services such as car park booking for varying fees. Car parks or eateries will pay a yearly fee to register, allowing them to offer promotions, advertisements and vouchers on the website.

Michael Woodward

BSc(Hons) Web Programming

A Web Based Shark Identifying and Logging System

A non intrusive way for teams to catalogue and identify individual sharks using images of their dorsal fin.

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