

GradEX2013

Staffordshire University 17 May, Stafford

Welcome to GradEX 2013!

It is my great pleasure to welcome visitors old and new to GradEX, our annual exhibition of project work undertaken by final year students at Staffordshire University. This year sees students from the new Faculty of Computing, Engineering and Sciences being joined by fellow students from the Faculty of Arts and Creative Technologies for the first time. Not only does this mean that Science students are new to GradEX, but also that the event has now become cross-Faculty. 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 wellestablished 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 2013 is sponsored by a range of employers and professional organisations. I am 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. I am very proud of our students and GradEX provides an excellent opportunity to celebrate their achievements. I hope that you can share in this celebration and that you enjoy your day with us at Staffordshire University.

Best wishes,

Professor Hastings McKenzie EngD, CEng, MIMechE Dean of Computing, Engineering and Sciences

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BCS Main Event Sponsor



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A Technology Strategy Board funded Knowledge Transfer Programme (KTP) from Staffordshire University will help you maximise the benefits you get from the next Graduate you employ.

Knowledge Transfer Partnerships

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- Will cost you less than employing the same graduate outside the scheme
- 60% of the costs are funded if you're an SME, 40% if you're bigger
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- £4,500 for travel and other costs.
- Half a day per week of academic expertise to help develop your project and guide your graduate
- KTP's even fit under R&D tax credits, saving you more money!

For more information about Knowledge Transfer Partnerships or to apply please contact the For Business team via 0800 169 2148 or email forbusiness@staffs.ac.uk.

* The average increase in pre-tax profit that companies taking part in a KTP realise. Technology Strategy Board 2011.

3

Contents

5	Automotive The University is grateful to LEONI for sponsoring this category	LEONI	
8	Computer Science and Software Engineering The University is grateful to Microsoft Dreamspark for sponsoring this category	Microsoft DreamSpark	
14	Computing and Information Systems The University is grateful to Synectics Solutions for sponsoring this category	SOLUTIONS	
16	Engineering and Design The University is grateful to the IET for sponsoring this category	Collective inspiration	
20	Film The University is grateful to Grand Independent for sponsoring this category	GRAND INDEPENDENT	
24	FX		
27	Games Design and Production The University is grateful to Phoenix Computers for sponsoring this category	PhoenixComputers Making technology work for you	
33	Games Modelling		
41	Games Programming The University is grateful to Microsoft Dreamspark for sponsoring this category	Microsoft DreamSpark	
45	Mathematics and Statistics		
46	Music		
48	Networks, Security and Forensic Computing		
52	Web and Multimedia		

4

Automotive

LEONI



Richard Beckett

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Cockpit Safety Improvements and Possible Developments

Cockpit safety is one of the most important things in motorsport design and development, this project is set up to look into this and create a usable solution.



Stephen Brown

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Head Restraint Devices for Side Impacts in Motor Racing

In recent years, driver safety has improved significantly in motorsport due to the implementation of the HANS device amongst others. These provide significant protection in the event of a head on impact. However, most do not protect in the event of a lateral impact. My project aims to change that.



Michael Collin

BEng(Hons) Automotive Engineering

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Computer Aided Design; Performance Exhaust for a VR6 Engine

An investigation into the application of CAE when considering the design and development of an aftermarket performance exhaust system. The project uses Ricardo Wave to make acoustic predictions and CFD to make flow predictions with the results being compared to a prototype to prove/ disprove the efficacy of such tools.



Ben-Charles Davies

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Development of Wheel and Nut Retention

The project conducted looks at the development of design into wheel nut retention. This includes the design of all the major features that influence the performance of the wheel nut retention.



Rowan Floyd

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Alternatively Powered Car Design

An alternative method for automotive propulsion has been researched, developed and proposed, with a view to compete directly with other existing and emerging technologies such as petrol, diesel and hydrogen.



Michael Grigg

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Shell Eco-marathon Car

A joint collaboration to produce a highly economical prototype vehicle that will be entered into the 2013 Shell Eco-marathon competition. The vehicle will be designed to reduce the aerodynamic drag, rolling resistance and weight, whilst producing a stable and controllable vehicle.



Ashley Hardie

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To Improve the Aerodynamic Efficiency of HGVS

In summary the project is designed to enhance HGV design to bring them into current era. Another aim of the project is to increase the aerodynamic efficacy of the HGV to try and decrease their fuel consumption and increase the efficiency. The importance of this due to the fuel price rises, making life easy for companies.



David Holmes

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Touchscreen/Vehicle Controller Development

Development of a touchscreen interface for agricultural purposes has never been more simplified when using Qt. Furthermore we assess the potential benefits of using a model based design strategy for an embedded systems environment within the automotive sector.

www.staffs.ac.uk/gradex #gradex Grade

Automotive

LEONI



Kyle Huntington-Jones

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Mechanical Kinetic Energy Recovery System Research

The project includes the research, development and component specifications of a Mechanical Kinetic Energy Recovery System used in a automotive application, to improve the economy of a vehicle. From the specification a flywheel model is simulated using Adams, demonstrating the potential benefits of automotive KERS.



Michael Lewis

BEng(Hons) Automotive Engineering

Design of an Adjustable Suspension System

A project that uses Computer Modelling and Simulation to demonstrate suspension components at work using the manufacturer's chosen values, then improving the suspension components and selecting values for the spring and damper rates to give greater performance.



lan Linthwaite

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Fun Cup to Britcar

This project is a vehicle dynamics based project, proving with minor modifications a vehicle can be made fully competitive in a higher calibre of competition than it was originally designed for.



Rocio Macias Caravaca

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The Modelling and Development of an Electric Kart

This project is born on the initiative of designing a gokart with chances of being able to be manufactured in the future. Develop a design of an electric go-kart, on the basis of an internal combustion engine vehicle with the same characteristics, existing in today's market.



Matthew Parker

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Improving the Aerodynamic Efficiency of a Standard Road Car

This project is based on improving the aerodynamic efficiency of a standard road car. With the use of both CAD and CFD packages, a model of a car will be tested, reviewed, modified and re-tested to show how modifications affect the aerodynamic flow and efficiency of the car.



Tomás Partida Piera

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Hybrid Drivetrain for Heavy Trucks and/or buses

Increase the efficiency and the reduction of fuel consumption of an existing truck, through the design and implementation of a hybrid solution. From harvesting some of the energy currently wasted, its storage and its conversion into movement or some other way that would allow it to achieve the mentioned reduction.



James Rawlinson

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An Investigation into and Redesign of Formula 1 DRS Systems

Drag reduction systems are a crucial tool in modern Formula One. This investigation aims to research and develop DRS by looking at improving the louvers teams are already using, researching and redesigning double DRS systems within the 2013 Formula One technical regulations and finally refining moveable flap designs.



Joseph Roper

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Classic Car Storage System

This project is intended to develop a cheap, space efficient home storage system for classic vehicles. The system is intended as a cheaper, home use alternative for the protection of vehicles bodywork against corrosion and damage to the current options of dry storage and expensive home alternatives.

Automotive

LEONI



Daniel Stephenson

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Scale Vehicle Test Platform

This project is designed to create an accurate platform for testing and demonstrating vehicle dynamics. The vehicle dynamics of a scale model are analysed and redesigned, using a full scale vehicle dynamics principles and theories to create a dynamically accurate vehicle test platform.



Thomas Urry

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Aerodynamic and Safety Development of Open Cockpit Helmets

A study of helmet aerodynamics and how their design can be improved to maximize performance in karting. As well as aerodynamics this project takes a look at the safety aspects that are employed by manufacturers today in open cockpit racing to ensure the drivers' safety.



Charles Watts

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Supercharging of a Naturally Aspirated Vehicle

An investigation into the effects of supercharging an NA engine. Based on an old kit which needs updating due to popular demand. looking into airflow, heat generation, stress and design.



Josef Williams

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MTB Pedal Bob Damping

This project aims to study and research mountain bike pedal bob on full suspension mountain bikes, utilising CAD and multi body analysis simulations in order to develop a way in which to prevent it from occurring.



Benjamin Woolley

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Investigation into Underbody Aerodynamics

Under-body design of road vehicles is relatively undeveloped, however this project will investigate the possibilities for improving the design of vehicle under bodies in both road and racing applications, conducting research into aerodynamic theory surrounding down force and streamlining.

7

Microsoft DreamSpark



Daniel Annoscia

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One Stop Multi-Functional Project Management System

Aimed at an SME company, the project management aims to bring a working team together as well as allowing individuals to complete tasks, reports, documentations and plans for team projects and individual projects. This will enable users to open one application rather than having multiple stand alone applications open.



Michael Bowman

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Web Based Application to Store and Manage Files

My final year project is to allow users of the web application to store and manage their own files on the system. The web application is usable from any web connected computer that has a web browser installed.



Neil Bagley

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Fitness Friend

An Android mobile application designed, to allow fitness enthusiasts to track nutritional and supplementation intake requirements, body statistics, create custom routines and monitor performance improvements of an individual's fitness and health goals.

> Creating an intelligent, automated Cross-Site Scripting (XSS) scanner the open leading - Red Text Project text leads



Charlie Briggs

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Creating an Automated Cross-Site Scripting (XSS) Scanner

The objective of this project is to research the web application vulnerability XSS, document and test currently available automated scanning applications, and produce one in PHP - providing in full: documentation, testing, analysis and evaluation.



Leon Barrington

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A Desktop Grid Computing Framework

A framework for developing, deploying and monitoring distributed applications. The software solution will enable science and research organisations to harvest and pool the unused resources from a group of desktop computers in order to solve computationally expensive problems.



Joseph Bellis

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A LAN Based Computer Monitoring and Fault Reporting System

A network monitoring system consisting of a single Server and multiple Client programs capable of operating on small to medium sized networks. Collection and presentation of data collected from all Client PCs via use of a 'Check-in' system to allow technicians to identify and diagnose potential network faults faster.



Cheng Chen

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GIST Website

GIST website is a website to introduce the detailed information about Staffordshire University. The builder would make roughly eight webpages, which introduce the accommodation, modules, necessities, facilities and buildings. The builder would insert pictures, videos and words in the website.



Liam Costello

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Multi-Android Solution for Transmitting Content to a Server

A highly-technical project working with both Google Android and App Engine, to distribute content between multiple devices and a cloudbased server. The prototype aims to apply a level of redundancy to content by distributing pieces to multiple devices via Wi-Fi Direct and traditional Wi-Fi.

Microsoft DreamSpark



Alastair Costley

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Migration of a Browser-Based Program to a Mobile Device

My project is to migrate an existing web product to a mobile platform (Android), in turn, giving the original program greater flexibility and relevance in the fast-paced world of mobile technology. This new application will give network engineers the power to see the status of networks in the palm of their hand.



Simon Deen

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Social Communication Website for Student Otaku Society

A social communication website in development for use by the Student Otaku Society of Staffordshire University. This system aims to fulfil needs for event discussion and other topics within the SOS.



Scott Dennison

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Prototype Church Worship Display Management Software System

This project involves the creation of a fully extendable prototype software product that will manage and display media in a church such as song words, notices and bible verses, potentially with support for running on a network or from an IOS/ Android device.



Richard Dobbie

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Entertainment App for Visually Impaired Touch Phone Users

An application designed and aimed at visually impaired people using smart and touch screen phones which is a growing market sector throughout the globe. This application will be a game which doesn't use sight as a main objective of game play. Instead sound will be the main contributing factor.



Nicholas Donohoe

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Enhancing User Experience with Gamification

A desktop to-do list application that demonstrates how game design and gameplay systems can be utilised to enhance user experience and motivation.

Richard Fox

BSc(Hons) Computing Science

Lap Feed

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Lap Feed, a Race Performance Analysis Tool

A combined hardware and software solution to track a vehicle's position and record statistics about it's performance whilst out in a racing session allowing for in depth analysis and scrutiny in order to improve the performance of an individual.



Robert France

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Automated GUI Testing Tool Application

The project is to develop a system to enhance software quality and accelerate the testing phase of software development for userfriendly front-ends formally known as graphical user interfaces (GUI's). The project demonstrates a system which performs testing criteria and identifies faults while monitoring the GUI.



Lee Gough

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An Employee Monitoring System for Android Smartphones

Thousands of employees around the United Kingdom are using company smartphones. This project aims to create a monitoring system which allows an administrator to monitor calling logs, text messages and track the phones location via GPS.

Microsoft DreamSpark



Gavin Ho

BSc(Hons) Computing Science

Super-Resolution Imaging Prototype

Despite the advancement in video technology available, there are still sectors in which low quality CCTV images are still used. So how do we solve this? Super-Resolution technique can be used to enhance an images' quality, through combining several images from the same scene, to create one higher resolution image.



Adam Holmwood

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Peer to Peer NXT Robotics Communication System

The Lego Mindstorms NXT 2.0 Robotics platform currently connect to each other using a wireless Bluetooth Master/Slave system. My project aims to create a peer to peer communications system to enhance the robots ability to communicate. This system will allow the robots to work together on a variety of tasks

Matthew Lawrence

BSc(Hons) Computing

A Web Based Version

The goal of this project is to

design and build a program

can use to create their own

applications and websites

in an entirely web-based

environment. This allows

developers' access to their

applications from wherever

they are and via any device,

a smartphone.

whether it be a PC, a tablet or

that software developers

Controlled Software

Development Tool

Science



Philip Hoult

BEng(Hons) Computing Science

"GPS-ize" a GPS System that will help with Capsizes

A GPS device to predict and help prevent a capsize which will also in the event of a capsize record the GPS location and sent this location to another device for a rescue team warning them of a capsized dinghy so the team know where it is to assist.



Nicky Levy

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Object Oriented Crowd Flow Modelling Application

An application which takes a user-defined, grid-based map of an area and simulates crowds of virtual people flowing through it. Regions in which bottlenecks form will be highlighted, in order to aid in the design of areas to allow large volumes of people to comfortably flow through them.



Asaad Hussain

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Generic Mobile Registration System for Mobile Devices

A mobile application to manage attendance that can be adopted by any organisation which is required to manage attendance. The application communicates with an online database to retrieve and post information. There is also a Client Management System which allows management of the actual database.

A Client Management, Billing system for Web Hosts + Integrates with WHM + API Access to data • Open source code + Completily customisable via templates + Fully automated via cron jobs

Gareth Luckett

Gareth Luckett

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A Client Management, Billing System for Web Hosts

A Client Management, Billing system for Web Hosts is a system that can integrate with existing web servers allowing web hosts to automate a lot of tasks, such as creating invoices, creating hosting accounts, suspending hosting accounts and allowing clients to manage their services on your web server.



Thomas Hutchinson

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A Geographical Location Monitoring System for Mobile Devices

This non-intrusive android tracking application notifies a teacher via Google Cloud Messaging should a student leave a pre-defined area, for example a school playground. The system is scalable allowing many teachers and students to use it simultaneously. Setup is easy as configuration throughout is minimal.

10

Microsoft DreamSpark



placement job vacancies

which are available and generate reports.

supporting the system.

Microsoft DreamSpark



Anthony Nixon

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Automated Expenditure System

In the current business world, many companies have an expenditure system for their employees, and a large portion of these systems are resource heavy and time consuming. This solution is to create an e-money based system with automated characteristics to tackle time consumption, financial consumption and exploitation.



Daniel Pomfret

BSc(Hons) Software Engineering

Source Control Software for Project Management

Version Control Software for Windows Operating Systems, which allows a logical way to organize and control revisions while also tracking specific feature development for a company that, develops a piece of software for multiple customers.



Sarah Pallett

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Automatic Timetable Clash Reporting and Management System

A timetabling system that can generate timetables for tutors and students and can automatically report clashes of lessons to the administrator/s who will then be able to amend the lessons and once done will notify the relevant tutors and students.



Chintan Parmar

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Decentralised System to Analyse Syslog Events: Cisco Devices

I plan to design and build a Syslog server application for small to large sized businesses using Cisco devices.



James Pink

BSc(Hons) Computing Science

Telesales KPI Tracking System with Web Service Connectivity

A business system for tracking key performance data within a telesales environment including integration protocols to allow for updates to be provided from an external source.



David Russell

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Real Time Fleet Tracking and Management Using Smartphones

An innovative project utilising cutting edge real-time techniques and location aware computing, to develop a multi-platform fleet tracking and management system. This project aims to deliver a cost effective strategy for small to medium sized couriers, wishing for greater safety and efficiency within their fleets.



Anys Sido

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A Touch-Screen Automated Restaurant System

A project focused on automating the ordering process of a full-service restaurant to improve the service times, increase customer satisfaction and offer accessibility to people who may be unable to or deterred from dining at a typical restaurant.



Richard Snell

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Robotic Industrial Operative

A robotic system that is developed to be a cheaper alternative to human workforce in industry. It is programmed to transport objects from one location to another, based on information provided from a main computer via a wireless connection. While avoiding any potential accidents through the use of hazard perception.

Microsoft DreamSpark



Lee David Thomas

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Otze - A Charity Research Tool

Otze is a research tool for the charity industry, storing information on Charities and Charitable Trusts. The tool is aimed at allowing researchers from the former to build cases to apply for grants of money and the latter to search for Charities sharing their interests to donate to.

Loan Car Scheme Manager



Daniel Wright

BSc(Hons) Applied Information Technology

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Loan Car Scheme Manager

A flexible web based application to manage a company's employee loan car scheme that allows employees to register and select their cars in order of preference from customised groups based on availability. With an automated allocation algorithm to streamline the back office process.



Grant Wall

Easy

BSc(Hons) Computer Science

e: Gremo@hotmail.co.uk **RFID; Attendance Made**

A prototype of an easy to step up and use attendance taking system using RFID for a variety of locations such as classrooms or the workplace. The devices allows users to swipe their card in front of the reader and it will then add them to the attendance list which can be viewed on the system.



James Westerby

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Multi Service EPOS System

An EPOS system capable of handling the requirements of multiple outlets, such as a retail shop, bar and restaurant. The system will also provide a centralised point of reporting and administration, allowing for owners of multiple outlets to utilise one EPOS system, whilst maintaining the ability of customisation.



Victoria Whelband

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Online Cookery and Weightloss System

A Database system (using MySQL and a phpMyAdmin server) with a web front end (Using XHTML, CSS, PHP and JavaScript) allowing users to register an account, communicate with other users (through forums), track and update their own data, keep a blog, search data and more.

Computing and Information Systems

SOLUTIONS



Samantha Barczak

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An Educational Tool on Methodologies for Final Year Projects

The project is designed to benefit Stoke based Staffordshire University students in selecting a suitable methodology for their final year projects. The system combines a section on tips given by lecturers for the success of a project and also an expert system to calculate which methodology is most suitable.



Tom Collins BSc(Hons) International Computing Science e: tomcollins@ globo-smart.com w: globo-smart.com The Convergence of Cloud Computing, Smart devices and the IoT

This endeavour investigates the implications of smart environments and the required systems for management and control. The project entails the development of a cloud asset management and control system, demonstrating the potentials of QR, RFID, GPS and Machine-2-Machine technologies within embedded and mobile devices.



Deepthy Blesson

BSc(Hons) Computing Science

Internal Catering Maintaining System

The project is about providing a small business a computerised system to manage their work effectively to provide a better service for the customers. The project is about providing a small business a computerised system to manage their work effectively to provide a better service for the customers.

Q2

Q2 Number of Tickets: Service Requests: Number of Fixes:

BSc(Hons) Computing

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A KPI-based Information

This project will create a

web based Management

number of KPIs and provide

Information System that

feedback and reports on

how they are performing.

obtained from a number of

This information will be

different data sources.

allows users to track a

Joel Davis

Science

System

Pass Percentage: Pass Percentage:



Jacqueline Buchan

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Offsite Information System to Enhance Educational Learning

An educational Information system accessible for phone users for help with learning that would provide access to additional learning materials and social interaction with other learners.



Jamie Dobson

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Educational Software to Teach Basic Mathematics

The project artefact is a web based application that is not only a learning platform to teach students (adult Learners) GCSE level mathematics, it also identifies areas in which students are weak so that their tutor can examine the results and incorporate this into their teaching.



Daniel Clarke

BSc(Hons) Computing Science e: darclarke1990@ hotmail.com Hybrid Representation Meta-Learning Algorithm Utilising NLP A prototype learning algorithm that simulates human conscious and subconscious memory attention and retention. This prototype will combine artificial intelligence

approaches of Symbolic Representation (Semantic Networks) and Connectionist Representation (Neural Networks) to provide a contextual hybrid learning system.



Sunil Goraya

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Management Information System for Martial Arts Business

This project will develop a management information system (MIS) and a website for two clients with a small multi location start up martial arts business.

Computing and Information Systems

SOLUTIONS



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CATS-Computing Asset Tracking System

CATS is designed to manage the vast array of information stored about various types of equipment stored in datacentres. What sets CATS apart is its integration into other management tools, its ability to extract some information autonomously and the flexibility to view information on a variety of devices.



EducationLearningSystem

Matthew Selwood

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Education Learning System: Virtual Learning Environment

A prototype Virtual Learning Environment (VLE) for educators and students to share study resources, task management and grading across higher education.



Dominic Keegan

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Restaurant Epos System with Integrated MIS

A management information system linked to an electronic point of sale system for use in restaurants. The system will be used to take orders and from the data stored by the system produce useful management information which can be used to aid the decision making process and to target marketing campaigns.



Moustajab Shah

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Electronic Flashcards for Learning Foreign Vocabulary

A software will dynamically produce foreign language flashcards based on a text book that will be displayed in a screen using a database. Every vocabulary will have a sound file played with it. Users will have a personal record of what vocabulary they are working on by book marking what they have not yet memorized.



Christopher Lambert

BSc(Hons) [Top up] Computing Science

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A Database Load Utility to Suit Various Platforms

A database load utility that reads the data source file, automatically maps it to a database table without user interaction, checks that the data does not violate any primary/foreign keys as well as not causing any data type errors before inserting the data into the database.



Asad Syed

BSc(Hons) Applied Computing

w: www.metallicsbc.co.uk

An Investigation of a Decision Support System

The purpose of this research is to investigate the impact of DSS on modern day businesses. The research will also be utilise for understanding the use of DSS and how useful they are for making better decisions.



Sophie Merriles

BSc(Hons) Computing Science

e: sophie.merriles@ gmail.com

A System with the Functionality of Tracking Medical Records

Technology within the NHS is developing all the time and is implemented differently in each hospital. This project will be to develop a generic system with the capability of tracking notes, the benefit of this is to ensure notes are not being miss tracked and misplaced.

Education system for the teaching of Non-Curriculum subjects

John While

BSc(Hons) Computing Science

e: j.while@hotmail.co.uk

Education System for the Teaching of Non-Curriculum Subjects

This project is an interactive learning tool aimed at giving a basic introduction to the subject of computing to KS2 pupils, with the intention of increasing interest in the subject. The system will include an interactive user interface for learning and testing, with a connected background database to record results.





Aman Aggarwal

BSc(Hons) Aeronautical Technology

e: aggarwalaman15@ gmail.com

Aerodynamic Analysis of an Aerofoil Using CFD

Investigated at different air flow such compressible and incompressible. To evaluate more about the aerodynamics effects of an aerofoil like drag, lift, pressure, generation of vortices and effect of angle of attack by testing using CFD package with computer and comparing the results between CHAM PHOENICS and ANSYS.



John Andrewartha

FDSc Electrical and Electronic Technology

e: andrewartha_john@ hotmail.com

3D LED Cube

The aim of the project is to manufacture and program a three dimensional light emitting diode cube which is to be controlled by a microcontroller. The product is to be used to enable physical visualisation of derived three dimensional mathematical functions.



Jonathan Archer

BSc(Hons) Product Design Technology

Improvement in Design of Audio Headphones

This project uses in-depth research to recognise possibilities for a future pair of headphones. This new product will incorporate a distinguishable feature aimed at solving a current negative social aspect that can come with extensive use of headphones. This product is also designed for a sustainable future.



Paul Beech

BEng(Hons) Mechanical Engineering

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Fuel Pre-Heating and Delivery System for a Biomass Gasifier

This project aims to increase the efficiency of the gasification of biomass fuel by pre-heating the fuel using the syngas produced by the gasification process. This system will also incorporate a fuel feed mechanism.



Carlos Benitez

BEng(Hons) Mechanical Engineering

e: carlosbenet@hotmail.com

Hybrid Kit Design for Nissan Note

The project designs a Hybrid Kit for a petrol engine vehicle. The challenge to face is the adaptation to a previous configuration by finding a suitable solution with an improvement of the vehicle performance and a low alteration of the vehicle configuration.



Luke Blakeway

BSc(Hons) [Top up] Electrical and Electronic Technology

e: luke.blakeway@ hotmail.co.uk

PIC Microcontroller Based Solar Battery Charger

The main aim of this project is to design and build a PIC Microcontroller based lead acid battery charge controller.



Troy Bodkin

BEng(Hons) Robotic Engineering

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Accurate Imitation of Fluid Dexterity and Stable Grip

This project is intended to prove that an accurate artificial hand can be produced without a heavy cost. The prototype demonstrates the ability to imitate the fluid gesturing and stable grip, similar to that of the human hand.



Christopher Brown

BSc(Hons) Aeronautical Technology

e: christopher.brown1992@ googlemail.com

Concept Aircraft Design and Testing in X-Plane

X-Plane is a flight simulation application released initially as a tool for the design of aircraft, and later adapted for pilot training. By using a number of concept aircraft and testing them in X-Plane, its use as an evaluation of aerodynamic performance and general handling of the aircraft is investigated.





Craig Carson

BSc(Hons) Product Design Technology

e: craigcarson92@hotmail.com

An Investigation and Design of Public Information Terminals

Nearly everybody, at some point, needs to use an information terminal. This project will look to redesign and improve the current systems to bring them up to date with modern technology. Whilst also trying to bring the best of portable technology to static terminals.



Brendan Haworth

BEng(Hons) Robotic Engineering

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Regulation of a Helicopter's Altitude via Embedded Control

Utilising data collected by an ultrasonic sensor and processed by an mbed microcontroller, a remote control helicopter will be able to reach and maintain a constant desired height. Additionally, this project also seeks to provide a greater understanding of embedded control and its application/ implementation.



Scott Cartwright

FDSc Electrical and Electronic Technology

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Automated Internal Bore Checking Jig

The aim of the project is to manufacture automated checking jig. This is for a new product that my company has just obtained. I am designing and manufacturing this product to improve manufacturing time within my company, this product will save time spent manually checking the components dimensions and overall save the company time.



Steven Daniels

BSc(Hons) Aeronautical Technology

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Wing Design for High Performance Aircraft

A completed wing design and assembly for a proposed general aviation Jet Trainer. Reflective in performance of modern aircraft in use by Global militaries intended to replace the current aging generation in use by civilian operators.



Nathan Douglas

BSc(Hons) Aeronautical Technology

e: nathan.carl.douglas@ gmail.com

Thermoelectric Power Generation in Jet Engines

A study into the possible use of thermoelectric materials to generate electrical power in jet engines by harvesting heat energy from the exhaust gases. The project aims to produce a realistic system that is more efficient than the current accessory drive/drive shaft system leading to lower fuel and maintenance costs.



Matthew Hodson

BEng(Hons) Product Design Engineering

e: Modge17@ googlemail.com

The Design and Development of Sports Training Aides

The project is the design and development of a sports training aide that will encourage the user to improve form and therefore performances in increments which when applied to different aspects of the activity add to create a greater overall improvement, the product will encourage the user to take an incremental approach.



Izzat Irawan Parno

BEng(Hons) Mechanical Engineering

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Biomass Fuel Quality Investigation

An experiment was carried out and the result compared with different type of fuel of biomass to obtain the quality of the fuel. The experiment took place in the university laboratory.



David Kent

BSc(Hons) Computer Gameplay Design and Production

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Speaker Cabinet Design Tool

The project aim is to build a fully functional, real-time, speaker cabinet design tool in a Games Engine. This tool will allow instantaneous changes of variables to give out readings allowing the user the freedom to change the designs on the fly and have instant feedback about how the changes affect the sound.





Soheil Komilian

BEng(Hons) Electrical Engineering

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Organic Solar Cell

This project is based on Organic/Polymer solar cells, The technology is producing semiconductors from polymer materials and it is being used to convert light into electrical energy. Iin this project specific materials are used, and the behaviour of the device is tested under different characteristics.



Samuel Law

BSc(Hons) Aeronautical Technology

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Flight Simulation Software vs Real-World Flying

As cheap flight simulator packages increase in sophistication more and more emphasis has been placed upon simulation during flight training. The project is a detailed and critical evaluation of two off-the-shelf flight simulation software packages to judge the quality and authenticity of the synthetic flying experience.



Mark Maher

BEng(Hons) Electronic Engineering

e: mark.maher@ hotmail.co.uk

Hand Held Gearbox Testing Tool

Design of a light weight, portable testing tool, for industrial gearboxes. The tool provides rapid measurement of input torque, and gear ratio, using an embedded microcontroller and sensors. Test data is downloaded to a PC interface, where reports and analysis are produced for end of assembly quality control



John Mason

BEng(Hons) Electrical Engineering

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Improvements to Automotive Visual Aids

An investigation into the problems and limitations when considering visual aids used in the automotive industry. Exploration into possible solutions through application of Electrical and Electronic Engineering.



Nina Noss

BSc(Hons) Robotics Technology

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Animatronic Head for Human-Robot Interaction

This project is based on the interaction between a Robot and a Human, with a focus on enabling the Robot to turn and face the Human with which it is interacting. The Robot head will have two microphones representing the ears, determining the direction of the sound depending on which 'ear' receives the loudest signal.



Ashley Parker

BSc(Hons) Robotics Technology

e: a.parker2k@gmail.com

Wireless Video Transmission and Remote Controller

This project allows control to a camera by using natural head movements whilst wearing a head mounted display. This system uses wireless communications to send movement data to the camera actuators.



Matthew Townley

BEng(Hons) Electrical Engineering

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A 60W Renewable Energy Source for Remote Application

This is a project focused on designing an Off-Grid power system for low power remote application. This system uses a hybrid energy source of solar panels and wind turbines which feeds into a charge controller with battery array, which provides a constant DC supply, which I will be working towards conditioning at 60W.



Matthew Vincelli

BSc(Hons) International Aeronautical Technology

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High Supersonic Commercial Transport Aircraft Design Concept

Using today's resources and technology, a concept for a high supersonic large capacity airliner has been designed that is to be ecofriendly, fuel efficient and for long-haul flight. A 3D model of the concept has been created and aerodynamically tested to analyse its efficiency during various stages of flight.





Daniel Whitehead

BSc(Hons) International Aeronautical Technology

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Aircraft System Failures Simulation

An evaluation of the features built into Microsoft's Flight Simulator X and Laminar Research's X-Plane 10 to enable the simulation of realistic aircraft behaviour under different system failure conditions.



Bartosz Wojtynski

BEng(Hons) Mechanical Engineering

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Design and Evaluation of Biomass Fuel Storage Unit

The aims and objectives of this project when completed will produce a set of specific deliverables. The main objective is to produce a biomass storage unit, the deliverable of this, if successful will result in a complete design of a storage facility.



James Christopher Woods

BSc(Hons) Robotics Technology

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Mind Controlled Robotic Arm

With technology ever moving onwards and advancing to stages which are only limited by our minds. Our minds are essential to developing these further advances. This project will implement mind control technology to control a robotic arm. This could help everyday people as well as greatly help the disabled.

Film





Sean Bastow

BSc(Hons) Film Production Technology

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The Revelation of Tim Richardson

Feature-length romantic comedy set during the rapture.



Matthew Brading

BSc(Hons) Film Production Technology

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3D Film Post Production

Digital Stereoscopic 3D is one of the biggest trends in film making, yet it is almost exclusive to high end films due to the cost and complexity of editing it. The aim of this project is to research and design an effective 3D post production workflow for low budget filmmakers.

The Innocent Man

Leon Callard

BSc(Hons) Film Production Technology

e: leoncallard@gmail.com

Classic Noir Film with Surround Sound "The Innocent Man"

This film is a combination of two different projects the first being 'An investigation into the production and post-production of sound design in film' and the second being 'An investigation into the production and postproduction of film noir' this film has a classic noir style with surround sound design.



Alex Carroll

BSc(Hons) Film Production Technology

e: schemesofreality@ hotmail.com

Chapters

A docu-drama filmed in Birmingham involving young people from the area who not only act in the piece, but actively helped shape the story of the film.



Joseph Cotton

BSc(Hons) Music Technology with Film Production

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Production Techniques of Action Sports Filmmaking

The aim of this project is to research into the growing phenomenon of DSLR filmmaking, with particular focus within the action sports industry. This research will reinforce the knowledge and techniques required in producing an original action sports short video.



Scott Coulthard

BSc(Hons) Film Production Technology

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A Technical Investigation into Visual Communications

Through researching different areas of visual communications, a film will be made highlighting these findings. The film will be a fictional short, about a man suffering with the loss of his wife, and the struggle trying to regain the trust of his daughters.



Daniel Delglyn

BSc(Hons) Film Production Technology

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P.I.C - Partner in Crime

A full colour film trailer and several scenes of a feature film. The film is a British Drama about friendship and tough love.



Jonathan Gale

BSc(Hons) Film Production Technology

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Trauma Team

An Observational Documentary on one of the UK's major Trauma Teams called MERIT, which runs within the West-Midlands during the night. The crew consists of one Air Ambulance Doctor and a Critical Care Paramedic, and are equipped to handle any medical emergency.





Chloe Harwood

BSc(Hons) Film Production Technology

e: chloelharwood@ hotmail.com w: shootingpeople.org/cards/ ChloeHarwood Perception and Cinematography (Old Too

Cinematography (Old Too Soon)

Everyone's perception is distinctive, no two people have had the exact same life experiences or memories, and therefore, everyone has their own individual perception. So if perception is distinctive how can cinema as a medium create meaning? This project is an investigation into perception and cinematography.



Carl Haynes

BSc(Hons) Film Production Technology with Management

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Cold Turkey Feature Film

Created by Carl Haynes (writer and producer) and Rob Ineson (cinematography) Cold Turkey follows a recovering drug dependant who, with the loving help of his mother, beats his addiction by ultimately going "cold turkey".



Matthew Hemes

BSc(Hons) Film Production Technology with Management

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Technical Investigation into Time Manipulation

Focusing on time lapse and slow motion techniques and how these can be utilised through technology, to enable us to perceive the world we live in differently. Ultimately to observe what we would not ordinarily be seen.



Tom Holmes

BSc(Hons) Film Production Technology

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Visual Effects in Film and Television

An investigation into the use of special effects and visual effects in film and television. The project explores areas such as chroma key technology, motion tracking, particle systems and motion graphics and demonstrates how correct style and design leads to the creation of striking and stimulating visuals.



Christopher Latham

BSc(Hons) Film Production Technology

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Trauma Team

The pilot episode of an original documentary following the West Midlands MERIT Ambulance team as they respond to the Midlands' most serious medical emergencies. The MERIT Team are the service's elite paramedics teamed with clinical doctors and powerful off-road vehicles.



Dom Lee

BSc(Hons) Digital Film and Post Production Technology

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An Investigation into the Use of Transitions within Editing

An investigation into the use of transitions within editing, particularly the use of invisible edits (where the edit point between shots is not obvious). The research has been backed up by a short film piece entitled 'Bliss', which was shot in south Devon, March 2013.



Alexander Machin

BSc(Hons) Film Production Technology

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Exploring the Boundaries between Photography and Film

An investigation into the use of photography in film and video. This will involve several aspects such as cinematic photography, time lapses and astrophotography and stop motion animation. This research will then be applied to create several practical pieces.



Thomas Mayoh

BSc(Hons) Film Production Technology

e: mayoh1991@gmail.com

Cinematography Specialising in Colour Theory

Investigating Cinematographers and Cinematography techniques of modern cinema. This encompasses and specialises in Colour Theory and lighting for different genres, to further my understanding behind the science of colour.

Film





Aileen McClelland

BSc(Hons) Film Production Technology

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Aileen McClelland Profolio

This is will be an opportunity to showcase my work. The work varies between music videos and film shorts that accompany an audio track.



Thomas Pantelakis

BSc(Hons) Film Production Technology

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How are Graphic Novels Translated Into Modern Cinema?

This project will look into the elements required to produce a film based upon a graphic novel. The areas focused upon within this project include; colour grades, stylisation and editing in addition to the stages taken to translate page and panel to moving picture.



Sophie Piedallu

BSc(Hons) Film Production Technology

3D Film Production

This report about 3D Film Production explores the differences with 2D film making. This is achieved by analysing 3D in the industry, looking at the techniques used to obtain the best possible 3D technically, but also to use 3D in the storytelling process. The knowledge gained resulted in a short 3D film.



Kyle Rossiter

BSc(Hons) Film Production Technology

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Small World

A 3-4 minute short film demonstrating various visual effects to tell the story.



Andrew J. Stelmach

BSc(Hons) Film Production Technology

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A Cinematic Investigation into Digital Camera Technology

Digital technology is changing the film industry and this project investigates modern digital camera technology alongside the fundamental techniques behind cinematography, resulting in the production of a short film.



Daniel Thomas

BSc(Hons) Digital Film and Post Production Technology

e: daniel.thomas99@ gmail.com

Editing a Narrative within Film Production

An investigation looking into editing within film production, specifically focusing on narrative to see if an edit can be planned throughout the pre-production process or whether it takes place only in the post production process.



Liam Turner

BSc(Hons) Film Production Technology

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An Investigation into Web-Based Distribution

This project looks into creating an interactive self contained web application, in which the user can manipulate the film that they are watching to change their perspective of the events. It also looks into the modern day marketing and distributing techniques required to raise awareness for new online media technology.



Josh Wakeman

BSc(Hons) Film Production Technology

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Is the Marketing of Film Moving More Towards the Internet?

Marketing and business of a short film can be a painstaking process with very risky results. This report will identify how small budget films are marketed to an audience and the business that follows the methods used in achieving the maximum amount of viewers possible, through the use of technology and social media.





Philip Wiseman

BSc(Hons) Film Production Technology

e: philipmichaelwiseman@ hotmail.co.uk w: vimeo.com/user5090813 An Investigation into Cinematic Directing Techniques

A thorough dissection of scenes from acclaimed films in order to gain a better understanding of directors' motivations. The investigation is intended to broaden the researcher's working knowledge of film directing, so that the findings can then be successfully applied during the practical production of a short film.



Nathan Wyatt

BSc(Hons) Digital Film and Post Production Technology

e: nathanwyatt@ rocketmail.com

Schoolboy Motocross

A documentary that follows the progress of a young motocross rider as he embarks on the biggest championship he's ever competed in. This is the story of a rider and a trainer and their journey as a team.



Steven Beaumont

BSc(Hons) Games Concept Design

e: B-Cinos@live.co.uk w: stevenbeaumont-art.com

Character Re-imagining for Games

The project tackles a character from a tale and re-imagines the character with a new look and personality for a new story. Through a custom design and production pipeline' the character is concepted and produced in 3D with the model presented in a real-time renderer. The concept will be shown via images and a showreel.



Patrick Dawkes

BSc(Hons) Digital Film and 3D Animation Technology

e: patrick.dawkes@ hotmail.com

Investigation into Fluid Dynamics for Film and Television

This project will take a look into the creation of Fluid Dynamics for Film and Television. Through the use of Realflow an examination of the calculations, creation and implementation of fluids has been undertaken. The result of this being the creation of three fluid shots suitable for use in Television.

Think a story to bit.



Mercedes Chan

BSc(Hons) Games Concept Design

e: mercedes_chan@live.com

The DreamWalker

The project is a short graphic novel following the story of Max, a young man who can walk through the dreams of those around him. Although this may seem like fun at first, he soon learns that he has to confront uncomfortable truths about others and himself.



Oscar Chapman

BSc(Hons) Digital Film and Post Production Technology

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Time in Motion

A five part motion graphics animation that looks at world events, music and film through the decades starting from the psychedelic 60s to the grunge of the 90s. The animation finishes off with a brief look into society today and humanity's future as the piece investigates into social entropy and the human psyche.



Jason Daish

BSc(Hons) Games Concept Design

e: Jason_Daish@ hotmail.co.uk

Research into Mixed Media Animation

The project at hand follows the creation of a CGI animation for film. Using multiple media types, it will tell an emotionally effective story about a single character struggling with an illness. Rig used in imaged created by Josh Burton. www.joshburton.com



Samuel Denvir

BSc(Hons) Games Concept Design

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Creating a Low Poly Modular Character from a Pre Defined IP

Creating a 3D modular character in the Rune Scape's artistic style that is limited by a hand held device.



Emma Dobson

BSc(Hons) Digital Film and 3D Animation Technology

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Creature and Dynamic Character Animation

A display of both creature and character animations, that have been produced in my final year of studies. Both projects aims were to create a sense of realism, the first a baboon acting in its natural environment, and the second aimed to show dynamic, yet fluid, movement in the form of a free running animation.



Joanna Eastell

BSc(Hons) Digital Film and 3D Animation Technology

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Photo Realistic Image Production

This project aims to research the technical and creative aspect of 3D rendering that will aid in producing photo realistic renders of a car using the renderer Vray. A final composite of the car will also be created.

24



Mark Evans

BSc(Hons) Digital Film and 3D Animation Technology

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Why Matchmoving is Required in Modern Film Making

Matchmoving is the process of integrating 3D Computer Generated Imagery into 2D live action footage whilst mimicking its camera movement. This creates an illusion of virtual elements actually being there amongst the action.



Matthew Le Quesne

BSc(Hons) Games Concept Design

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The Use of Matte Paintings in the Videogames Industry

This project focuses upon the use of matte paintings in the Games industry and the way in which this compares to those used in the Film and Television industry. The practical piece utilizes these techniques to create the opening cinematic for a game with a mixture of 3D and 2D assets.



Mark Morris

BSc(Hons) Digital Film and Post Production Technology

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Mark Morris Portfolio

I will be presenting a collection of projects I have worked on at university including my Final Year Project.



Callum Parker

BSc(Hons) Digital Film and 3D Animation Technology

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The Mutiny, an Animated Short

A two minute 3D animated short about two men in a boat.



Daniel Puddle

BSc(Hons) Digital Film and 3D Animation Technology

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Destruction Simulations for use in Film and Television

This project looks at the use of rigid body dynamics and fluid effects in the creation of a destruction shot. This project focuses on the creation of simulations in Houdini using the Bullet physics solver and the Pyro smoke fluid solver.



Laura Quirke-Leach

BSc(Hons) Games Concept Design

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An Investigation into Anatomy for Character Concepts

This project is based around how we use anatomy when creating character concept designs and models. It goes into the theories and practices used by historical and modern artists and how it has developed with a final outcome of a realistic painting and model.



Sophie Reid

BSc(Hons) Games Concept Design

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Things that go Boo; Horror Character Design

Researching industry workflow to create a genuinely scary monster and a protagonist suitable for the horror genre.



Alexandra Shapland

BSc(Hons) Games Concept Design

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Fighting Game Character Concepts Inspired by Fairy Tales

An exploration into the design process and development of 2D character concepts for a fighting game inspired by traditional fairy tale stories.



Olivia Shaw

BSc(Hons) Games Concept Design

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An Exploration into the Creation of Stylized Characters

This project is an exploration into the creation of stylized characters that maintain a feasible skeletal and muscular structure. It focuses particularly on improving knowledge of anatomy and this research has been put into creating a game ready character that has been entered into the UDK engine.



Amber Smith

BSc(Hons) Film Production Technology

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An Investigation into Compositing Techniques

A look in to compositing techniques and processes using Nuke software to produce a series of visual effects shots showcasing a variety of the techniques that create a seamless final image.



John Tytherleigh

BS(Hons) Games Concept Design

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Games Concept Pipeline: Terradeso

A concept pipeline for the creation of an original game - 'Terradeso'. This includes a written narrative, backstory, open world map and concept art visualisations.



Zac Vout

BSc(Hons) Games Concept Design

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How can Ethnicity Be Implied onto a Range of Models

An investigation into the current generation Y and their differing facial characteristics, using a selection of consenting models from various ethnic groups set by the national census; these will lead to a series of multinational heads based on their likeness to be displayed for the games/ films market.



Horror Game Audio Design

Nicholas Abboyi

BSc(Hons) Games Audio Design

e: nicholasabboyi@ hotmail.co.uk

Horror Game Audio Design

The project involves taking on the role of a Sound Designer in order to reinterpret the audio from existing computer games within the horror genre. This will involve producing a final video clip consisting of reinterpreted audio, for different game play videos that exhibit unique elements of the horror style.



Edward Bennett

MEng(Hons) Computer Games Design

e: eddbennett@ hotmail.co.uk

Gameplay and Balance in Real Time Strategy Games

The goal of this project was to create a fully playable RTS (Real Time Strategy) game. This project drew upon all my skills as a designer, modeller, texturer and animator to create the required units, buildings, environment and UI for the game. The academic side of the project was focused on unit and gameplay balance.



Sami Al-Zanki

BSc(Hons) Computer Games Design

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Comparison of Modern and Old User Interactivity in Games

The project focuses upon looking at traditional controller schemes for games and how they can be applied or replaced on a mobile device. The project is to find out if player interaction is more efficient with the traditional or the modern approach by having players play identical games with different control schemes.



Nathan Booth

BSc(Hons) Computer Games Design

e: nathandbooth@live.co.uk w: boff1991.wix.com/ myportfolio

An Analysis of Linear and Non-Linear Game Narratives

The project intends to analyse both linear and non-linear narrative styles, stating their similarities and differences and what makes each successful. From this, a questionnaire will be produced to survey general opinion on the matter, and also a redesign of a game with a different style of narrative.



Bradley Austin

BSc(Hons) Computer Gameplay Design and Production

e: bradleyaustin36@ gmail.com w: bradleyaustin.co.uk Using Emergent AI to Create Interesting Gameplay What do ant colonies,

snowflakes and internet communities have in common? They all display emergent behaviour, many simple components come together to create something remarkably complex. I have taken this principal and applied it to game Artificial Intelligence, in order to create interesting gameplay elements.



Nicholas Boyd

BSc(Hons) Computer Games Design

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Management, a Matter of Mobility

In our mobile age, apps, applications and sites are all bustling to let us manage our work wherever we are. This begs the question, why not one for all? This project aims to provide a web-based waterfall model management tool equally at home on your phone or your projector.



Jamie Bambrough

BEng(Hons) Computer Gameplay Design and Production

e: jamiebambrough61@ googlemail.com w: jbambrough.blogspot.com/ An Investigation into Pervasive and Location-Based Games

This project will investigate the use of pervasive techniques in modern mobile gaming. The research will look at information used, ethical concerns, current generation examples and a look into the future of mobile gaming. The app will focus on creating a hub for easy access and organisation of this type of game.



Alexander Cheng

BSc(Hons) Computer Gameplay Design and Production

e: alexander_cheng@live.com w:uk.linkedin.com/pub/alexcheng/65/a65/9aa/

Investigation into Challenges within Computer Games

This project will investigate the process of creating a challenge within a video game. The project will look at the different types of challenges in multiple genres of games, the balancing of the difficulty of the challenge and the rewards and motivations for players to accomplish the challenge.





Dominic Coles

BSc(Hons) Computer Games Design

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Does Narrative Help or Hinder the Video Game

In my project I look to answer the question about Narrative helping the triple A titles of this current generation of video games, or if it hinders them by causing the players to experience a world they just wish to play in, not immerse in. I will also be putting the theory into practice with an interactive narrative.



Jason Cross

BEng(Hons) Computer Gameplay Design and Production

Bidiretional Conversion between Digital to Analogue Games

Most board games are turned into video games, but why does this work? And what do companies change to make these games great? With these ideas in mind why are video games not turned into board games? This project will find out why.



Heather Cooper

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Multi Device Gameplay

using Web Technologies This project looks at multi device connectivity within UDK through the use of PHP, Apache and MySQL. This will allow the user to play a level on their PC, upload the state of the game to a web server and then pull this information back on to their iPhone and continue playing from where they left off.

HAPPENED

HORROR

WHIAT

TOTHE

James Elkin

Games Design

BEng(Hons) Computer

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A Look into the Decline of

the Survival Horror Genre



James Cox

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Why Do Players Spend so Much Money on Free-To-Play Games?

This research document explores the main aspects that make free-to-play games viable and such large moneymakers in today's rapidly evolving market. Using this information, I have developed my own free-to-play business model which I applied to an existing paid game to convert it into a feasible free-to-play adaptation.



Michael Fisher

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Games Industry: Overcoming Barriers to Accessibility

Accessibility is an on-going issue, and something that has never been fully realised and catered for by the Games Industry. This project looks at how the Games Industry both provide, and fall short in providing accessibility solutions, presented with interviews and questionnaires summarised into a professional report.



fmod studio

Connor Coxall

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Investigation into

CryEngine3 Audio Solutions This project utilizes the aforementioned software in conjunction with FMOD Studio, aiming to showcase examples of complex audio events, whilst comparing the engines functionality with a contemporary engine. The project will create an environment after testing has been completed, aiming to showcase techniques acquired.



Dennis Foster

BSc(Hons) Computer Gameplay Design and Production

e: Preswylfa@googlemail.com w: www.DJFoster.co **Creating Novel Gameplay**

Creating Novel Gameplay using Crowd-Based Al systems

Crowds of human-like AI are not uncommon in games, but are often poorly implemented due to low populations, unrealistic human behaviours, poor player interaction etc. This project aims to develop fun and interesting game play using an AI system capable of simulating realistic human behaviours as a central mechanic.

d This project examines the decline in popularity/ quality - and the concerning causes - of the survival horro

causes - of the survival horror genre in recent years. These changes were scrutinized against theoretical and community research, with the resultant analysis used to produce a framework to aid in the creation of higher quality future titles.





James Frith

BSc(Hons) Multiplayer Online Games Design

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Gameplay Mechanics to Allow Personalised Player Interactions

By using Richard Bartles' research into player types and comparing it with other researchers work into the field, I can understand who will be playing my content. I am then able to research the gameplay mechanics to fit all of their needs. This allows me to design content for any intended user.



Daniel Jefferies

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Player Psychology behind Character Choice

A study into the reasons behind character selection for in-game parties and the possible links between chosen characters and a player's personal psychology and personality as well as a study of how character loss, replacement and death affects a player's party.



Trishul Gohil

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A Study on Correlation between Game Sales and Media Opinion

Media Opinion can quite often change the way a game is viewed by the public. This project is about the influence that media opinion such as video game reviews or previews have on game sales. It investigates various aspects such as the power of review scores, user opinion and game journalism controversy.

Luke Jones

BSc(Hons) Computer Games

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Using Gamification in

This project looks at using

games to enrich education

for primary school children,

the researched techniques to

make the best ever learning

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Education

game.



Sean Humphreys

BSc(Hons) Computer Gameplay Design and Production

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Player Movement as a Game Mechanic for Novel Gameplay

A demonstration of a game mechanic based on your character's past movements. Create a trail by moving, then use it to solve puzzles and traverse the environment. The project attempts to answer the question - can you build a whole game from this one simple mechanic?



Toby Kellaway

BSc(Hons) Computer Games Design

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Designing Realistic Tycoon Game Mechanics

What is realism and why use it in games? This project looks at game design theory on realism and applies the research through the creation of a 2D prototype game called 'Supermarket Tycoon'.



Thomas Jarvis

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A Study of Game Exploration With Regards To Level Design

An examination into existing games and how each promote exploration with regards to level design. Afterwards the creation of a level with these aspects in place will allow research on how the average player takes these practices into account when playing a game.



Jake Lewis

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Real Time Weapon Customisation in the Unreal Engine

The project, as in the title, revolves around customisation and also freedom. Freedom for the end user to have hundreds of weapons in game with the ability to switch them around at any time. Using 3ds max, Photoshop and the Unreal engine utilities this system has been created from the ground up to expand and improve.





Valentin Macau

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Game Lore and Class Design

In depth look into lore, mythology and its effects on character and class design in MMORPGs with the aim to create and establish an entirely new class the 'Dragon Knight' which is fully designed and fundamentally ready to be developed on a theoretical level for an existing MMORPG.





Stephen Maguire

BSc(Hons) Computer Gameplay Design and Production

e: m005521a@student.staffs. ac.uk st3vo92@live.co.uk The Evolution and Future Forecasting of Platformer Games

The Platformer has been a well-known genre for the last 20 years and is still relevant to gamers today. What has evolved in the genre's mechanics and features to keep the genre refreshing, how the current state of the genre today is compared to the past and what can be improved to keep the genre refreshing today.



Steven Major

BSc(Hons) Computer Gameplay Design and Production

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Designing a Trading Card Game

Board games and Trading games have always played a large part in the development of how we play games and devise strategies. Even with current generation video games, analogue games continue to grow, this project seeks to develop a brand new card game that could compete with currently played card games.



Daniel McKee

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Violet Pulse Graphic Novel Styled Game

Producing the conceptual art of a self-created graphic novel styled world.



MAJOR LEAGUE GAMING

Phillip Moore

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Investigating the Features and Fundamentals of eSports Games

With the increase of competitive play within the gaming community along with the rise of tournaments to accommodate those with the skill to compete for cash prizes; this paper will identify the key features that a designer must take into consideration if they wish to create an enjoyable yet competitive experience.



Samuel Moore

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Designing Games to Appeal to Child Audiences

Children represent one of the fastest growing markets in the video game industry however it is not a market many developers choose to specialise in. By studying what aspects of video games appeal to children, a framework can be created to help craft fun experiences specifically for children.



Joseph Noble

BSc(Hons) Computer Games Design

Creating Highly Detailed Ingame Characters

Investigation into techniques and methods used to create current realistic in-game characters as efficiently as possible.



Steven Peake

BEng(Hons) Computer Gameplay Design and Production

Furthering Weapon Systems in Games

The aim of my project is to look at the history of weapon systems in games and develop a new type of weapon progress based upon this research. This has lead to the creation of a weapon system which evolves by itself based upon the player's actions.





James Poultney

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Exploring the Potential of Cross-Platform Gaming

The rise of social media games and the release of the Wii U and its Cross-Platform capabilities has brought a new discussion around Cross-Platform games. This project will look into whether cross-platform gaming has potential and develop a game experience with the aim of Cross-Platform.



Steven Rogers

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Investigating the Dynamics of a New Style Quest Structure

This project will be looking at MMORPG games that are currently in the market and how they deliver their quests to the player. This project will also be looking at narrative and how it can affect the player. Then from the information gathered implement a new style quest system into a proprietary XNA games engine.



Robert Pritchard

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A Representation of Alternate Lifestyles in Video Games

This project is a computer game that shows examples of alternate sexual lifestyles within society, and how your reaction to certain individuals can reflect on how you are viewed as a person. Taking the role of someone with no memory, it is up to the player to choose their acceptance, or their prejudices.



James Pugh

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The Use of Character Archetypes in Games

With increasing demand for games with good narratives companies are capitalizing on character driven gameplay. However budget games and cash-ins are killing the quality of the craft. This guide looks into character design, aiming to give writers insight into creating deep characters and how to avoid generic cliche's.



Raymond Quinn

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A Designers Framework: How to Craft the Modern Boss Battle

The boss battle framework is an interactive designer tool, developed from industry research and player feedback. It characterizes the essential design beats for creating satisfying boss battles from beginning to end and guides a designer in the process of creating dynamic battles in both traditional and modern styles.



Joe Stanfield

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Investigation into Achievements in Games

This project aims to investigate and unlock the power of Achievements in games and provide an insight into their ability to increase a game's longevity and replay value, as well as becoming a bragging right within the community of gamers.

31



Daniel Siviter

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Action Quest - An RPG Experience!

Action Quest is a prototype of a traditional Japanese RPG that has elements of the Action RPG genre integrated into it. The focus is to improve the degree of character customisation during the game and to allow the player a greater depth of control with regards to story development.



Damon Springthorpe

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Storytelling Delivery and Simplification

The computer game story is an often over looked aspect of a game, with many just throwing up a screen of text. This keeps the game and the story oddly separate. Solutions to bridge the gap between story and game have been explored, with an emphasis on improving the flow while telling the story.





Liam Stevenson

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Semiotics in Environmental Design

Blending Ludology and Narratology together. Video games are a unique medium which can efficiently use an environment, or scene to create a secondary narrative experience. Semiotics in environmental design explores how signs and symbols can be used to create narrative, lore and understanding in an interactive game.



Christopher Watts

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Recreation of Explosive Damage within a Virtual Environment

The project is to recreate explosions and damage with realistic effects and properties to help simulate damage against certain building materials or to add realism to games. The project being developed could be used for either simulation purposes or to add a more realistic experience to the environment within games.



Scott Whitehurst

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Pacifism in Video Games

A study into how violence may be circumvented in modern combat-orientated games and the effects this has on the player, gameplay and general approach. Titles covered include stealthbased and western RPG titles and how they accommodate for or prove more challenging for a pacifist player.



Kenneth Wildman

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Can Game Genre Alter Game Psychology According to Bartle?

Do game genres alter what motivates players in games? By reworking the original Bartle test to suit different genres and hosting playsessions for participants, the results of the tests are collated and analysed to determine whether games genre affects a player's motivation in-game.



Ashley Allcock

BSc(Hons) Computer Games Design

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The Re-imagining of a Mythical Creature

The aim of this project was to re-imagine a mythical humanoid creature, developing a unique representation of an Orc. The final product was designed to fit into pre-existing fantasy lore despite looking different to traditional designs. To achieve this the character went through an extensive iterative design process.



Mathew Ayers

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Reconstruction of an Historical Building for Visualisation

This project will be bringing history back to life, by reconstructing a historical building using photographic reference to create an architectural visualisation. UDK will be used to present a walk around, fly through of the project. UDK will also be used for still renders, project summary in this field.



Stephen Ambler

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A Study of Modular Architecture in Games

The aim of the project is to study key topic areas relating to the subject of modularity, specifically modular architecture, and analyse the workflows and techniques discussed, through the production of the practical piece; creating modular building sets for UDK.



Lukhwinder Chumber

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Production Techniques for Creating a Game Character

This project explores and implements the latest in industry-standard production techniques for creating a high-quality character model for a current-generation video game.



Reiss Archibald

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Use of DirectX 11 features for Character Creation

It focuses on the use of Direct X 11 features, such as: Tessellation and DX11 Hair, to create a realistic and interesting character while also looking at how they affect the character creation pipeline and older features such as: Sub Surface Scattering.



Peter Conneely

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Creating Realistic Game Environments

This project focuses on designing and creating a small, realistic game-spec environment, and presenting it in both a playable piece in UDK and through 'beauty renders' from 3DS Max. Current generation games technologies are used in an attempt to create a realisticlooking, 'game-spec' piece.



Thomas Aston

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Constructing a Scene over Differing Generational Periods

The purpose of this dissertation is to find out whether it is possible to create an environment in different generational periods, whilst keeping the exact structure only altering the textures.



Oliver Cooke

BSc(Hons) Computer Games Design

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Markerless Motion Capture for Games

Motion capture has a firm place in video games production that comes at a relatively large financial cost. Just how far can we push inexpensive hardware such as the Playstation Eye and Kinect in order to deliver game ready animations and cinematics for both face and body?



Maxwell Crosthwaite

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Modular Environment Design

A modular environment presented within UDK.



Adrian-Eugen Cruceanu

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A Study on Infusing Vehicles with Personality for Next-Gen G

The project is an analysis of how personality traits and character translate into shapes, forms and colour. The final outcome will be a game ready model that showcases the findings through its design.



Lawrence Davenhill

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Designing, Modelling and Presenting a 3D Character

The project covers the entire process for creating a 3D character including the concept, modelling and texturing stages. Further research looks at techniques such as composition and lighting to improve the presentation of the final piece.



James Davies

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Changing the Aesthetic of a Scene without Changing Structure

The creation of two environments representing different genres utilising the same models but with different textures and lighting to create to visually distinct scenes.



Alex Davies

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3D Modular Environment and Weathering

3D Modularity is used to create a stunning environment whilst intelligently using assets that can be replicated throughout the scene. One way the repetition can be broken up and the scene appear more realistic, is to implement weathering to a high standard that affects both geometry and the texture.



Benjamin Dixon

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Destructible Environments within UDK

This project looks at designing a playable destructive environment within the Unreal Development Kit (UDK). Fracture, an in-engine tool and Apex, a leading software solution developed by NVIDIA have been used to develop one environment so a comparison can be drawn between the 2 solutions.



Craig Dower

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Vehicle Design, Development and Usage in Games

An investigation into the methods that developers follow to create a non-licensed vehicle for their games to a similar quality standard as a licensed vehicle. This also includes portrayed vehicular damage, development budget and in-game marketing purposes.



Nicholas Elliott

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Modular Design within a Sci-Fi Environment

This project investigates the implementation of a modular workflow within a Sci-Fi games environment, studying the techniques and methods used by industry professionals to produce a final current-gen environment within the UDK games engine, coupled with a video fly-through.



Andrew Fellows

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Dynamic Character Styling for Games

This project tackles the creation of a stylistic look for use in a 3D games engine. Through the use of custom shaders within the Unreal Engine, a character with an accompanying visual style is brought to life as a dynamic asset and potential protagonist for a game.



Guy Gildersleve

BSc(Hons) Computer Games Design

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Model Transformation in Game Engine

An investigation and creation of a model that can transform into a different object and/or vehicle while still working in the Unreal Engine.



David Forrester

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Using Anatomy to Create a Character to use in a Games Engine

This project will look at the use of anatomy in the creation of a female cyborg character that will be used as a playable character in a current generation games engine. The final model will be presented in engine as a playable character using images and a rendered video



William Forster

BSc(Hons) Computer Games Design

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Adaptation of an Existing Environment for CQB Level Concerns

The project is based around the creation of an 18th century town hall in Congleton which will then be adapted to meet CQB death match aspects. This will involve filling space for close quarters cover using existing building elements. The adapted environment will also include dark disturbing visual effects.



Karl Hardy

BEng(Hons) Computer Games Design

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Female Stereotypes in Video Games

A look at how contemporary games portray lead female character as idealistic females. The project aims to challenge this by creating a non-stereotypical lead female character using current industry modelling techniques. Results will be displayed within a games engine.



Eliot Gardner

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Modular Environments and Weather Effects

Creating a realistic fantasy environment with two distinct goals. First, using modular modelling techniques for fast, efficient level building in the game engine. Second, simulating the effects of weather in a scene by implementing realistic, easyto-modify snow cover inengine using UDK's powerful Vertex Paint tools.



Daniel Harvey

BSc(Hons) Computer Games Design

Research into Aesthetic Narrative for Character Models

What if we could explain what sort of personality a character has in a video game without the need of exposition that could break the flow of the game? Perhaps a character's appearance is enough to accomplish this? This project aims to research more into character aesthetics to improve character designs.

Richard Hall

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Building a Better Jedi Knight

The project creates a current generation game character using efficient DX 11 rendering techniques to create a realistic result. The character created is Jedi Knight Kyle Katarn from Star Wars Jedi Knight 2: Jedi Outcast.



Joshua Hill

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Fantasy Environment Art for Games

A game's visual appeal can often mean the difference between the mediocre and a truly immersive, unforgettable experience for the player. This project will explore the world of fantasy art and visual storytelling through the creation of digital concept paintings for a real-world game development pipeline.



Aleksandra Magdalena Kolodziej

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Character Creation for a Sprite Based Game

This project focuses on the design and creation of a character for the BlazBlue fighting game. It will cover an in depth research, design of the character and sprite creation. The final sprite sheet will be presented in a functional prototype playable in the Game Maker Engine.



Jamie Hill

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Creation of Anthropomorphic Characters

The project involves analysis of the design traits of iconic anthropomorphic characters in the games industry such as Banjo-Kazooie, Sonic the Hedgehog and Crash Bandicoot and then applying the gathered knowledge to create an original character.



Amanda Jones

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Investigating the Creation of Fantasy Beasts for Games

Exploring the design process behind creating a believable and anatomically viable fantasy creature for a game. The in-game purpose of the creature is explored and the resulting concept and 3D model show the necessary evolutionary adaptations needed to fulfil this purpose.



Matthew Jones

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Environment Creation for Real Time Strategy Games

A study into how to create a environment for an RTS game and into the battle of Stalingrad. This research was then used to create a full RTS environment based on the conditions in Stalingrad.



Keith Lai

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Endgame Boss Character Design

Boss characters are important in many of today's video games, this project will look into what makes a boss character, and what makes them so interesting. This includes research in all areas of 2D concepting and 3D modelling, with the creation of a convincing boss character using industry techniques.



Zachary McCormac

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Modular Weapons in Games Engines

This aims of this projectare to investigate modular weapons in games and to produce a modular gun system in a games engine through concepting, modeling and scripting.



Ben McEwen

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Creating an Art Deco Damaged Environment

This standalone Art Deco style level showcases the works of decay from destructive and foliage elements in an office like environment from concept to the Unreal engine.



Rebecca McGrath

BSc(Hons) Computer Games Design

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Effective GUI Design for PC Games

Based on research into core graphic design principles and an investigation into modern video game GUI's, the four in game menu screens of the original N64 Legend of Zelda Ocarina of Time have been re-designed for a PC platform. The re-design has been implemented into UDK using Scaleform to demonstrate the research.



Matthew Nelson

BSc(Hons) Computer Gameplay Design and Production

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Production of a Sci Fi Environment

This project is complete Science Fiction game environment running in Unreal Engine 3, made to industry standards and expectations for visual quality and performance. The environment was designed and built as if it was part of a larger game level.



Alex Mehroke

MEng(Hons) Computer Games Design

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Investigation into Modular Environment Design

To plan and construct a modular Angkor Wat environment using UDK along with DX11. This is done to develop a universal workflow for asset and environment design.



Thomas Morledge

BSc(Hons) Computer Games Design and Programming

Rigging and Animation Workflows for Unique Facial Structures

This investigation looks into the best techniques for making a unique face come to life, including methods of rigging, creating facial expressions and animating believable lip syncing. Accompanying this is a unique alien face that has been modelled, rigged, and animated with both facial expressions and lip syncing.



James Murphy

BSc(Hons) Computer Games Design

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Transforming Characters within Games

An investigation into transforming characters within games. researching how transforming characters function and how they affect gameplay from this, a custom 3D model of a transforming character has been created and animated.



Barnaby Panton

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Using UDK to Create a Real-Time Weather System

The goal is to efficiently replicate a Mild Mid-Latitude climate inside UDK, from different weather states such as rain and snow, researching and then using systems such as the shader network to control water or snow effects on various surfaces, skydome transitions, and other features, all in real-time.



Emily Parkes

BSc(Hons) Games Concept Design

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Efficient Character Rendering For Games

An in-depth investigation into the efficient rendering of a detailed game character. Testing creation methods to formulate an effective pipeline culminating in the presentation of life-like skin and hair, sleek sci-fi elements and a textural range including metal and cloth.



Thomas Pawson

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Sculpting for Production

The aim of this project was to determine the pipeline and methods used by industry professionals to create a 3D model in ZBrush, which will then be printed in 3D This project was inspired by the models created by Games Workshop, and will adhere to the standards in which they set.



Lee Perry

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An Investigation into Environmental Effects in UDK

A project involving the creation of a realistic city environment inside UDK and an investigation into the various techniques that can be used to add environmental effects to it.



John Petch

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The Skoragon: Combination of a Scorpion and Dragon

The combination of a scorpion and dragon into a single creature to be used as a hero piece in next generation video games. Experimentation with different feature variations in order to produce the most "realistic" final piece to be modeled for use in engine.



John Ravenhall

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Investigation into DirectX 11 Features for Environments

This project focuses on the use of Direct X 11 features for creating game environments, including tessellation through displacement maps, deferred lighting and image based reflections. The project will include an environment portfolio piece build in Unreal Engine 3.



Benjamin Robson

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Production of Derelict Scene for a Modern Games Engines

The project will produce a derelict and aged scene ready for a modern games engine.



Steven Shea

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An Investigation into the Creation of Anim Sets for Games

This project focuses on discovering the most effective and efficient techniques used to rig and animate characters for computer games. A playable character will be placed in a level to demonstrate the most efficient techniques of rigging and animating.



Arron Steel

BSc(Hons) Computer Games Design

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Design Development for Action Game Vehicles

The aim of the project is to produce a 3D drivable vehicle for a first person shooter game. The vehicle will be developed to the point where it is ready to be rigged for game usage. It will be fully textured and imported into a real time renderer.



Shaun Stroud

BSc(Hons) Computer Games Design

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Silverstone Racing Circuit Development

Scratch built accurate 3D model of Silverstone Circuit in Northamptonshire, England. The circuit is developed in 3d Studio Max and exported to Gmotor2 namely rFactor for racing and testing. Come have a drive with on the circuit.



Andrew Stuart

BSc(Hons) Games Concept Design

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Creating and Lighting a 3D Game Environment

The project will be to create and light an environment within the unreal development kit games engine. It will take inspiration from a 19th century oil painting by Benjamin Leader



Robert Sutcliffe

BSc(Hons) Computer Games Design

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DirectX 11 Focused Environment Creation

The project researches into the features implemented into current generation game engines with DirectX 11. An environment has been created using the research that focuses on presenting these features and performance comparisons have been made between it and DirectX 9.



Christopher Tinsley

MEng(Hons) Computer Games Design

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Recreation of an Environment using DirectX 11 Technology

This project looks into how the features of DirectX 11 could be used to recreate a classic environment scene, features such as Tessellation and Parallax Occlusion Mapping are used to create a visually rich and interesting scene that would potentially be ready for use on a next generation games console.



Stephen Trimble

MEng(Hons) Computer Games Design

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Realtime Character Morphing

This project is designed to produce an efficient transforming character in a real-time environment by researching and utilising morph target and mesh swapping techniques.



Ross Walker

BSc(Hons) Computer Games Design

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Re-Imagining and Developing a Fairytale Environment

Fairy tales have a strong psychological link to our childhood, this project appeals to that connection by taking a classic and iconic fairytale environment and reimagining its design to create a recognisable scene that can be implemented into a game engine, while also remaining an art piece.



Michael Walls

BSc(Hons) Computer Games Design

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Minas Tirith, if Constructed in North Wales

In a world filled with fantasy, what would happen if one of the main iconic cities looked different, would that change the entire environment around it? For example what would Minas Tirith, from the books "Lord of the Rings", look like if it was created from different pieces of inspiration?



Thomas Watson

BSc(Hons) Games Concept Design

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An Investigation into the Creation of a Humanoid Character

The aim of this project was to create a character inspired by the art from the cinematic trailer for Resident Evil: Operation Raccoon City; focussing on effective character design, efficiently portraying the model within the UDK engine, and maintaining the high level of detail apparent throughout cinematic trailers.



Nadir Whitelaw

MEng(Hons) Computer Games Design

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Next-Gen Vehicle Design and Production

Vehicles are an integral part to many games. This paper looks at the design process of a flying vehicle made for next-generation consoles. Research into areas such as concepting, modelling, coding and engine implementation will be covered and tested to determine the effectiveness of techniques used.



Danielle Whyte

BSc(Hons) Computer Games Design

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Stylised Boss Monster Creation

This project explores the process of designing and creating a large boss monster in the style of the game Monster Hunter. The monster will be designed to fit in with the game's universe both aesthetically and practically, and will be developed to current modern game standards.



Giverny Wilson-Martin

BSc(Hons) Computer Games Design

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Dragon Design and Development for UDK

The project goals are to design and model a 3D fantasy creature for the Unreal engine. The design will be based on animal anatomy and the model will be rendered with a simple rig to demonstrate deformation consideration, as well as a fire breath particle system.



Nathan Wood

BSc(Hons) Computer Games Design

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Modelling a Sci-fi Lizardman

This project looks at various techniques used to design and produce video game characters in the industry. Then a lizardman character will be made using the most optimum technique for producing a character that will be used in a game engine.



Matthew Wright

BSc(Hons) Computer Games Design

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Research into Optimising Environment Art Pipeline

Research into multiple pipelines and techniques used to create environment assets in games and producing an optimised workflow to create an environment from concept.

Microsoft DreamSpark



Chris Bean

BSc(Hons) Computer Games Programming

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Real Time Simulation and Rendering of Fluids

Until recently fluid simulation has been impossible to do in real time, but with recent advances it is now possible to implement in real time for use in games. This project implements a fluid simulation algorithm that would allow for realistic features such as waterfalls or rivers in games.



Matthew Boslem

BSc(Hons) Computer Games Design and Programming

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Artificial Intelligence Formation Management System

An investigation into the creation of an artificial intelligence formation management system and how modern day artificial intelligence is created to produce a realistic and efficient end product.



Steven Bourke

BSc(Hons) Computer Games Programming

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Level Editor using DirectX 11

A level editor created with the use of DirectX 11.



James Bourne

BSc(Hons) [Top up] International Computer Games Programming

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Complex Procedural Terrain Generation

The project is an investigation into the automated development of terrain containing complex structures.



Robert Butler

BSc(Hons) International Computer Games Programming

e: Robert@tonabshin.co.uk

A Symbol Recognition to 3D Graphics Scene Generator

Using image recognition coupled with a simple image, an alternate process to generate a 3D world is utilised. Create 3D scenes for a game through paint or other image creation tools.



Nchimunya Choongo

BSc(Hons) Computer Games Programming

Virtual Reality Motion Capture Framework

Virtual Reality framework for capturing the motion of users for use in virtual reality video games and applications.

HTML

Chimuka Choongo

BSc(Hons) Computer Games Programming

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Cross-platform HTML5 and Javascript Game Framework

An HTML5 and Javascript Game Framework allowing for the easy creation games which run on multiple device browsers.



Joshua Dadak

BSc(Hons) Computer Games Programming

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Performance of Destructible Game Environments with Voxels

This project demonstrates ways in which to improve and enhance the performance of using voxels in a destructible game scenario. It shows the use of various techniques to improve updating as well as different ways to generate terrain and also the most pressing issue using voxels is storing the vast amount of data.

Microsoft DreamSpark



Nathaniel Dassardo-Joseph

BSc(Hons) Computer Games Programming

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Destructible Game Environments for Mobile Devices (Android)

Ever wanted to create your own custom world on the move? This project takes a look into the various techniques used to create dynamic 2D worlds and how this can be achieved on mobile devices. Time to get a bit (Android Platform).



Alec Davis

BSc(Hons) Computer Games Programming

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Interactions between Android Devices in a Multiplayer Game

This project will demonstrate numerous ways as to how Android devices could interact with each other in a turn based game. The final aim is to produce a high quality multiplayer game application that also meets the high standard of apps found on the Android market



Jamie Dobson

BSc(Hons) Computer Games Programming

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Exploring Chance with the Aid of Casino Games

Exploring chance and randomness using a casino game simulation.



Daniel Fox

BSc(Hons) Computer Games Programming

BSc(Hons) Computer Games Programming

RTS Base Management Al

An artificial intelligence advanced enough to create and manage a base independently. While using a strategy that it sees fit as well as being dynamic enough to respond to the opponent's strategies and modify its current strategy in a meaningful way as to create sufficient challenge to the user using a fuzzy logic AI.



Alexander Gibson

BSc(Hons) Computer Games Programming

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Investigating uses for Alternative Interfaces in Video Games

This project investigates the situations in which alternative human interface hardware may be effective for computer games, whether they're used for playing games or in tools for creating games. Specifically focusing on Microsoft's Kinect device, an attempt shall be made to create some form of simple level design tool.



Jack Griffiths

BSc(Hons) Computer Games Programming

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Real-time Grass for Games

A look into currently available techniques and optimisations for procedurally generating and rendering realistic-looking grass in real-time as part of a game environment. The project includes the development of a DirectX 11 component to provide realtime generation of grass for use in game development.



Jonathan Hart

BEng(Hons) Computer Games Programming

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Real Time Rendering of Procedurally Generated Planets

This project looks into the real time rendering of procedurally generated planets, using an appropriate level of detail for various distances from the planet, ranging from far out in space to the planets surface.



Leigh Jevon

BSc(Hons) Computer Games Programming

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Fluid Dynamics in Video Games

See the exciting and varied uses of fluid dynamics simulation in a video games environment. Several prototypes and sample game levels will be demonstrated. The game-play and graphics possibilities made feasible by an efficient implementation of fluid dynamics are limited only by the imagination!

Microsoft DreamSpark



Benjamin Kadel

BSc(Hons) Computer Games Programming

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Using Kinect to Generate a Natural User Interface

I will take the game "Minecraft" that allows a user to explore and edit the world around them. I will recreate the essential game components but using the Microsoft Kinect sensor as the primary input method, with the belief that interactivity will be enhanced.



Timothy Lawton

BSc(Hons) Multiplayer Online Games Programming

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3D Online Games Environment

In this 3D Online Games environment you can see some of the most basic components which are often seen in the most generic MMORPGs, including server-client architecture, multi-user chat systems, smooth 3D character animation and lag reduction techniques.



Benjamin Nelson

BSc(Hons) Computer Games Programming

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Squad Simulation Framework: Tactics for Overcoming Obstacles

This project aims to provide an interactive framework to control squads of computer game bots. It demonstrates bots with a believable level of intelligence when navigating terrain without causing strain on hardware. There is a strong focus on terrain navigation in group formations and tactics for overcoming obstacles.



Pathfinding For Swarms By Stephen Phillips

Stephen Phillips

BScHons) Computer Games Programming

e: stephenneilphillips@ gmail.com

Pathfinding for Swarms

This project will produce an optimised solution to poor swarm path finding found within many games. Using virtual-leader swarms, an A* pathfinder and adaptable formations the artefact will be able to navigate agents across maps in a coordinated and tactical manner.



Alex Pritchard

BSc(Hons) Computer Games Programming

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Realtime Random Natural Environments for Games

Generating an environment procedurally lessens the burden on artists and larger game worlds are practically impossible to create by hand. There is a greater demand for bigger game worlds with diverse ecosystems, predominantly open-world games, therefore there is an increasing need for real-time procedural environments.



Matthew Robinson

BSc(Hons) Computer Games Programming

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Collaborative AI in Team-Based Games

A capture the flag game, in which the artificial intelligence agents use goal driven planning, communication and collaboration to perform strategic and tactical actions to achieve a common goal.



Adnan Suleman

BSc(Hons) Computer Games Design and Programming

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Emotions in Al Agents

The project was to investigate how emotions can be modelled of character agents in computer games. The research involves of some scenarios to provide a good investigative platform.

How will you build it? Fully Cateminate Garges Engine Two Swinded

BloxEngine

Thomas Swindell

BSc(Hons) Computer Games Design and Programming

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BloxEngine

BloxEngine is a fully customizable, component based 3D Games Engine. It is constructed in such a way that new components can be added with very little change to the existing Code Base. The developer can dictate the configuration of the engine to best suit their needs.

Microsoft DreamSpark



Daniel Tait

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Investigating the Procedural Generation of Virtual Worlds

This project demonstrates the procedural generation of a 3D city; using such methods not only saves resources during production, but can also provide a new experience each time, and defeat problems with RAM limitations when dealing with large environments by only producing what is immediately accessible on the fly.



Andrew Worstencroft

BSc(Hons) Computer Games Programming

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AI Difficulty Vs Artificial Difficulty

The main aim of this project is to investigate using Al as a means of controlling difficulty instead of the more traditional methods.



Andrew Thomas

BSc(Hons) Computer Games Programming

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Dynamic and Realistic Facial Skin Texturing

An investigation into the limitations in the creation of a photorealistic and dynamic human face in computer games. The project will implement a solution to create a realistic human face which will allow dynamic movements to generate facial expressions.



Daniel Ward

BSc(Hons) International Computer Games Programming

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Parallel Progressive Ray Tracing for a Network of GPU's

An implementation of a parallel ray tracing algorithm that runs on a cluster of GPU's.



James Wild

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Combat Pool - Code Re-use

The design and implementation of a comprehensive games engine capable of lighting, collision, artificial intelligence and physics. Through the use of unified structures and content, this and a wealth of example content were produced over only three months by one person. The demonstration is a mobile game.

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Maths and Statistics



Oliver Dewhurst

BSc(Hons) Mathematics with Applied Statistics

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Modelling the Change in Population of the United Kingdom

This report looks at the factors which affect population change, such as the number of births and deaths, and international immigration and emigration and identifying any patterns. Different methods of projecting the population are investigated and applied to project the population for the years 2011 to 2031.



Behnom Havaei-Ahary

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Predicting Odds for Barclays Premier League Games

Betting on sports is a multibillion pound business. Bookmakers create odds for games that will both entice the betting public and also ensure they will always make a profit. This project looks at the techniques used to create these odds and specifically the odds for a home win in Barclays premier league games.



Matthew Kiteley

BSc(Hons) Mathematics with Applied Statistics

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Recreating the Outcome of Euro 2012 using Statistics

The project consists of using statistical techniques used in prediction. Hopefully it will be able to create a fairly accurate model which can be used to predict European Football Tournaments in the Future. Depending on its accuracy this model could be used in the future for financial gain.



Thomas McLauglin

BSc(Hons) Mathematics with Applied Statistics

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An Investigation into the Away Attendance of Bristol City FC

This research project aims to determine the factors which affect attendance in Bristol City away matches and to use this information to create a model to be able to forecast the away attendance of future matches. The method of choice will be multiple linear regression.



Leighann Nicklin

BSc(Hons) Mathematics with Applied Statistics

e: leighan.nicklin@ hotmail.co.uk Studying Scaling Methods and Measuring Opinions on NL Speedway

This project aims to investigate scaling methods and which delivers the best results while also looking into speedway supporters' opinions towards the state of the National League in Speedway and more specifically, the possible promotion of the Dudley Heathens, a National League team that are exceeding expectations.



Tolulope Paul Oladele

BSc(Hons) Mathematics with Applied Statistics

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Does Being Less Risk Averse Mean you are More Prone to Become a Smoker?

Is there a link between a person's attitude to risk and the use of tobacco? This project takes a look at the problem and finds an answer to it by collecting data from students and using a whole range of statistical techniques and methods to analyse it and get results.



Natalie Tipton

BSc(Hons) Mathematics with Applied Statistics

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Forecasting Admission Sales into a Farm Park Attraction

A major issue for small tourist attractions, such as a farm park, is forecasting admission sales. A software tool is developed using an appropriate forecasting model that will allow for up to date forecasting of admissions based on relevant variables, such as expected rainfall and day of the week.



Helen Waugh

BSc(Hons) Mathematics with Applied Statistics

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Climate, Weather and Money: How do Trees fit in to this?

Trees as a cash crop can be destroyed by weather. How does a business accommodate such things into its budget forecast? This model predicts profit according to weather forecasts so that the weather can be beaten! Tree seed: its not just for birds.

Music



Stuart Ankers

BSc(Hons) Creative Music Technology

e: stuberta91@gmail.com

Sound Design for Animation

The project focused on how sound is created for Animation films and explored comparisons to Live Action films in terms of technical processes and creative decisions. The end result is a complete re-design of the soundtrack to Lucas Martell's 'Pigeon: Impossible' incorporating original sound design and musical score.



Scott Houston

BSc(Hons) Creative Music Technology

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An Investigation into the Musicality of Sound Design

The project looks into how musicality can be used as a method to manipulate sound design that can create a deeper emotional meaning to sounds, to assist the story development and to create a more immersive viewing experience for the audience. The research is then applied into creating the sound of a short animation.



Greg Brown

BSc(Hons) Music Technology

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Specific Technologies for Theatre Sound

Hardware and software are rarely developed for sound in the theatre. This project explores the technologies available in other areas and implements them for use in theatre through research and simulation of designing, creating, installing and operating sound.



Giovanni Derienzo

BSc(Hons) Music Technology

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Architectural Acoustics

This project details the design parameters of a medium sized concert hall, including the architectural and theoretical acoustics associated with the project.



Samuel Gibbs

BSc(Hons) Creative Music Technology

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Interactive Generative Music Systems

Two versions of an interactive generative music system. One designed specifically for live performance making use of audio analysis to influence the system, and an adaption of the same system as an installation piece allowing for direct interaction from visitors.



Maria Hurst

BSc(Hons) Music Technology

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Investigation into Cost of Constructing Hi-fi Speakers

This project's main aim is to see if it's possible to construct a pair of hifi speakers in the home environment, limited by cost, equipment, and the materials available. This will be done by research, into both the design and the cost of good quality speakers, and also by practical work (building a pair of speakers).



Niall Lund

BSc(Hons) Creative Music Technology

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A Computerised Compositional Partner

In an endeavour to discover more efficient and interesting music composition processes, this project explores the ways in which computers can be used to assist, inspire or even generate music for a composer, building a small repertoire of pieces along the way. This covers both existing software and custom patches.



Andrew Morris

BSc(Hons) Music Technology

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House Music Production Techniques

Three Electro-House tracks were created for this investigation into the production techniques used in modern Electro-House Music. Various techniques were experimented with, using ideas from books as well as popular tracks and artists, and those found on internet forums, to keep up with the constantly evolving genre.

Music



Fraser Parr

BSc(Hons) Music Technology

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The Recreation of a Classic: Sultans of Swing

This project illustrates the production process used to produce a commercially acceptable multi-track recording. The project also investigates the necessary technologies, and techniques used to acquire this. The outcome, two mixes of 'Sultans of Swing by Dire Straits', one digital, and the other an analogue hybrid.



Povilas Strumila

BSc(Hons) Creative Music Technology

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Generative Sonification of a Video

This project investigates how video data could be translated into musical phrases and rhythms. The portfolio is done in a software environment, where video is analysed in real-time to produce musical content.



Lindsay Phillips

BSc(Hons) Music Technology

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The Design and Creation of a MIDI Controller

A MIDI Controller has been designed and created based on an analysis of MIDI controllers on the market. It investigates the development stages in building a prototype, from understanding and choosing components required to the coding of a Microcontroller. It aims to enhance creativity through custom hardware control.



Richard Rowe

BSc(Hons) Music Technology

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An Investigation into Modern Drum Recording and Production

Drums are arguably the most important element of pop and rock recordings, and have been since as early as the 1960s. This project investigates into modern drum recording and production, with particular focus on the technologies and techniques used.



Jonathon Stoker

BSc(Hons) Music Technology with Management

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Producing and Releasing a Commercial Pop Product

An investigation was undertaken to show the creation, production, promotion and digital distribution of a commercial audio product.



Lucas Trigg

BSc(Hons) Creative Music Technology

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Sound Design for Animated Shorts in a Surround Sound Environment

The project investigates techniques and theories used in composing music and processing sound for animated shorts in a surround sound environment.



Jarred Tyson

BSc(Hons) Creative Music Technology

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How Sound and Music Creates Immersion in Video Games.

The project is an investigation into how sound and music in video games can create immersion. The sound effects, music and dialogue was recreated for an extract of recorded gameplay from Halo 4.



Raad Al-Jawahiry

BSc(Hons) Computer Networks and Security

e: raad.aljawahiry@gmail.com

Investigating LDAP Directory Server Impact on VPN connection

This Project aims to investigate and analyse the impact on a Virtual Private Network connection when a Lightweight Directory Access Point server is added to enhance the performance and security of the connection.



Daniel Ball

BSc(Hons) Network Computing

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Investigation into Security on a Cisco Voice Over IP Network

This project involves looking into what security should be implemented for a Cisco IP Telephony network.



Adam Bennett

BSc(Hons) Digital Forensics

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Virtual Machine Memory Forensics

An investigation into the files created when a virtual machine (VM) is suspended. Specifically the memory dump file, which should contain all data residing within the VM memory at the time of suspension, including encryption keys. These keys can then be used to decrypt any encrypted virtual disks.



Paul Biggin

BSc(Hons) Computer Networks and Security

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NFC Security

Research into how NFC (Near-Field Communication works, look at the possibilities with the use of NFC, how secure the technology is and if there are any risks involved with having an NFC enabled device.



Jonathon Biggs

BSc(Hons) [Top up] Forensic Computing

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A Mobile Phone Triage Solution - Using Intelligence to Accelerate Triage

Multiple cases + Multiple devices = Backlog and a need to prioritise. Triage software for mobile phones simply offer only another level of examination. This project aims to introduce the concept of using case background/ intelligence to reduce the amount of data practitioners have to analyse at the triage stage.



Emily Bromley

BSc(Hons) Network Computing

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A Study on the Impact of Implementing IP Security Cameras Wi

The project focus will be extensive research into the transmission of IP signalling and the impact this has on a network bandwidth on a small scale say in home surveillance or on a larger scale within a corporate LAN environment, including solutions to improve the networks performance and quality of service.



Rebecca Clements

BSc(Hons) Digital Forensics

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Windows XP v 7 Registry Differences: Digital Forensics Impact

An investigation into the differences between the Registry from Windows XP and Windows 7 systems and the impact these differences have on a forensic examination. Data gathered from the systems will be compared and assessed on substantiality, also noting which system Registry is more valuable in a forensic examination.



Anthony Francis

BSc(Hons) Forensic Computing

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Forensic Analysis of a Physical Dump from an Android Device.

The Android operating system is forever being developed and causing great complications for forensic examiners, this investigation will allow for a better insight to the different ways data can be found on an Android device throughout any investigation by reviewing it through a hexadecimal dump.



Mervin Francisco

BEng(Hons) Network Computing

Investigating the Effects of IPv6 on Quality of Service

The project will investigate and evaluate how IPv6 is going to affect the current state of Quality of Service within a Converged Network. A series of experiments will be conducted using real networking equipment to gain an important insight in to the overall effectiveness of IPv6 on Quality of Service compared to IPv4.



Thomas Halson

BSc(Hons) Network Computing

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An Investigation into Wireless Micro Cells

My project is a study into whether wireless micro cells are a viable solution is high client density areas, and how the lack of a directional antenna affects range and throughput.



Anas Hasanmire

BSc(Hons) Computer Networks and Security

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Investigating Sniffer Detection Techniques and Countermeasures

Detecting the presence of illicit packet sniffers on heterogeneous networks and looking at multiple techniques to detect them in real-time as well as effective countermeasures.



Charlotte Hodgson

BSc(Hons) Digital Forensics

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A Methodology for the Retrieval and Analysis

This project aims to research and investigate the current methods and tools available, with the view of developing a new forensically sound method of examination for Xbox consoles.



Wayne Jasper

BSc(Hons) Network Computing

e: waynej1@ waynej1.plus.com w: linkedin.com/pub/waynejasper/56/b90/586 **An Investigation into QoS** within a converged network The aim of this project is to investigate ways to improve overall traffic performance within a congested converged network. With the

within a congested converged network. With the implementation of a variety quality of service (QoS) techniques and analysing the impact these different techniques have on overall performance, then an effective solution can be found.



Michael Law

BSc(Hons) Digital Forensics

e: Refi@live.co.uk

Evidence gathering comparison between SSD and HDD

An investigation to determine the potential variations in the evidence gathered from a Hard Disk Drive and a Solid State Drive.



Paul Manders

BSc(Hons) Computer Networks and Security

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An Application to Share Computer Resources in a Grid Network

A prototype application that utilises the idle computing resources on a network to execute tasks that would otherwise be processed on an individual computer. This is achieved by creating a grid environment using connected nodes and enabling a server to dynamically assign remote resources on a request by request basis.



Kane Narraway

BSc(Hons) Digital Forensics

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Manual Examination of Sat Nav Devices using KML files

This projects primary goal is to manually examine a number of sat nav devices and come up with both a cost and time effective solution for examiners who encounter these devices in the field. The creation of a forensic toolset in order to help the examiner interpret and report on the data found will also be created.



Timothy Rickard

BSc(Hons) Computer Networks and Security

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Monitoring of Employee Owned Devices on a Company Network

A research project into the aspects of companies using BOYD (bring your own device) Researching the advantages and disadvantages of employees using their own equipment and looking into correcting some of the issues businesses face when deploying these kinds of systems.



Joshua Rickers

BSc(Hons) Digital Forensics

e: josh.rickers@ googlemail.com

Forensic Analysis of Standard and Modified Consoles

A forensic examination of factory standard games consoles and games console that have been modified to run user generated code with an image dumper for various games consoles. The images dumper can be installed and run on the modified consoles.

here transform

Michael Robinson

BSc(Hons) Digital Forensics

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AVoSC - Windows 7 Restore Point Analysis

Research into how Windows 7 implements Volume Shadow Copy files and a software tool to simplify the investigation of said files for Forensic Examiners.



Elizabeth-Constance Rose

BSc(Hons) [Top up] Forensic Computing

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Use of Bluetooth in Mobile Phone Forensics

This project investigates whether or not Bluetooth alters the state of a mobile device, and the affect it would have in an investigation.



Elliott Rowe

BSc(Hons) Digital Forensics

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Exploiting Social Networks for Predicting Unrest

This project is an investigation into social media and what impact it has on social and civil unrest. Asking the question of whether it's use as an outlet of people's anger and upset can be linked to rioting and if there is a way for law enforcement to use the social sites to predict and stop these activities.



Mariusz Rybacki

BEng(Hons) Network Computing

IPv6 Security Risks to business

The purpose of this project is to analyse IPv6 vulnerabilities using different assessment techniques, identify threats and describe mitigating techniques that can be used to prevent it.



Hannah Sharp

BSc(Hons) Digital Forensics

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Massively Multiplayer Online Game Data Recovery Techniques

Massively Multiplayer Online Games (MMOs) have become a new tool for the targeting of youngsters and vulnerable people in regards to online grooming. This project focuses on the ways in which activity from these games can be gathered and used as evidence within a forensic investigation.



Angela Sterne

BSc(Hons) Digital Forensics

Smartphone Apps and the Recovery of Data from Them

A research paper discussing the areas of cyber-crime, smartphones and forensic analysis, to determine what information can be recovered from smartphones. This paper will determine what steps can be taken to retrieve that information from smartphone apps and create a new step of my own.



Netsai Svunurayi

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Effects of Network Congestion Management

Due to the rapid growth of internet, many problems have become unavoidable, such as lack of necessary network bandwidth and some network environment have high latency restrictions. These limitations result in network congestion when the applications are running over a low bandwidth link.



Benjamin Thomas

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A Novel Framework for Mobile Phone Analyser Development

This report will discuss different types of mobile phone tools and analysis them to be able to create a framework to improve an area of these tools. The report discusses the area of mobile forensics and how the area has grown over the years.



Myat Thu

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Effects of IPv4/IPv6 Dual Deployment Have Upon Multicast

The effect of IPv6 transition mechanisms have upon multicast communications and investigation of its impact on the network performance in real-time low latency environment.

Thomas Welsh

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A Method to Quell Rapidly Propagating Worm Infections

A novel, hybrid system that combines an Ethical Worm with bio-inspired detection methods to be used as an active defence method in order to prevent malicious software from propagating across networks.



Robert Wilson

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IPv6 Security Vulnerabilities and Mitigation Techniques

The world is running out of IPv4 addresses. In the next decade we will see the rise of IPv6, the next-gen protocol for Internetworking. But how secure is it really? What security risks are involved and how can these threats be mitigated?

INFO Manifest Loaded INFO ManifestState=Co INFO Patch completed INFO Patching end INFO User logs in. INFO User must check

Steven Wright

BSc(Hons) [Top up] Digital Forensics

Analysis and Investigation of MMO Game Logs

Project and artefact involving forensically gathering Massively Multiplayer Online Game logs by using the registry to find if specific games installed on the system and then retrieve the logs to be analysed by the investigator.



Daniel Adcock

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Public Transport GPS Tracking System

A real-time location and estimated time of arrival service for public transportation, provided through utilisation of GPS technology within a mobile tracking device. Data is uploaded and displayed cartographically, with previous location and time data consistently analysed to improve estimated time of arrival accuracy.

COMPANY

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Hi there. Here at GG we repair any phone for a low fee, and we'll even come and visit you to do so!

Services New booking

Martin Collins

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Marketing and Management Website for Small Businesses

A customer management tool for businesses that allows business owners to organize bookings, offer customer support and share information about their services.

#HashDAQ

Steven Berridge

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Real Time Twitter Stock Exchange Game

Looking at new ways of utilising data retrieved in real time from Twitter, this stock exchange application analyses Tweets to calculate price values for hashtags, which can then be invested in by players of the game to earn them money over time. This project makes use of technologies such as Node. JS, MongoDB and PHP.

Emma Copestake

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An Online Multimedia

The project will focus on

the practical application

educational tool to provide

18 + with viable information

of multimedia web

technologies as an

about social health

education.

Learning Environment for

BSc(Hons) Web

Development

hotmail.com

Young People



Mathew Bowker

BSc(Hons) Multimedia Computing

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Android Multimedia Stationary Cycling Application

In recent years fitness technology has become more standardized and allows many of these technologies to communicate. There are now many applications that use these devices to monitor or track a user. What I have created is an entertainment application that uses this technology to interact with an Android device.



Mark Chapman

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E-learning Canvas game

A creation of a canvas game, designed to run of all current browsers and devices with the use of HTML 5 canvas and javascript. Also to help children of ages 5-7 with keyskills1 science of the national curriculum.



Kyle Dempsey

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An Online Parking Payment Service

This project will be a new electronic payment system to be used as a more practical way to pay for parking. The new system offers an alternative cashless payment system where people use a device with internet compatibility to pay online.



Fay Dixon

BSc(Hons) Web Design

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A Investigation into Branding and Marketing Websites for Users

An investigation into the method of branding and marketing websites for specific users with a selection of prototypes showing the outcome, project focuses on what a specific audience want in the branding and marketing of websites, and what designers do to make websites attract the right audience.





Jason Millis

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Stereoscopic Website

This project looks at the different ways of implementing a website capable of being displayed in 3D using different technologies without compromise to the media or site layout and design. The technology it promotes includes both anaglyph filtering and the modern technologies usable with modern 3DTV's.



Cameron Owen

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3D Interactive Social World Experience

A 3D interactive world, with the ability to let a user walk around an environment and interact with objects. The social world as a whole brings users together with social integration and sharing of data between those connected.



Communication

Nathan Palfreyman

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Cross Platform Microsoft Communication

This project aims to create a system across multiple Microsoft devices, where applications can communicate with each other. Three applications across windows 7, windows phone 7 and Xbox 360, will be able to exchange information and create gameplay that allows for interaction between the various devices.



Stephanie Smeeton

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A Web Application to Locate My Ideal Hotel

The project aims to design and build a web application to enhance the user experience of finding a hotel.



Matthew Park

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My Website Tracker

Provides a web agency with a unique selling point and reduces customer support time. Clients easily access on demand their online business data, simplified analytics, social interactions and personalised support guidance. This multiple device web application updates them whether they are in the office or on the move.



Michael Upjohn

BSc(Hons) International Web Programming

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A Centralised Severe Weather Data Repository

There is currently no widely available cartographical solution for the recording of severe weather events across the USA. Such a system could be extremely valuable and serve as a basis for future work on forecasting severe weather and thus saving lives.



Kingsley Raspe

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www.whynotemploy.me an Online CV and Portfolio Showcase

Whynotemploy.me is designed for jobseekers and employers alike. By providing an attractive, intuitive and extensive online CV and portfolio showcase, users can show off who they are and examples of their work. Using special ranking algorithms, employers are presented with users who best meet their search criteria.



Kevin Simpson

The web application aims to provide people with an easy way to manage a nutrition plan tailored to their needs. Once registered, an initial draft plan will be assigned automatically by the system. The user may then browse the provided food library to create new plans or substitute meals from the generated one.



BSc(Hons) Web Development

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The bowl - A Customisable, **Responsive Nutrition** Planner



Alex Williams

BSc(Hons) [Top up] Web Development

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An Event Based Social Network for Football

An event based social network developed for football fans as an 'in-match' social accompaniment. The application provides a platform for users to chat, rate performances and upload images during and after the match, whilst offering user competitiveness in the form of achievements for 'checking in' at the event.



Michael Wright

BSc(Hons) Web Development

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Realtime Browser Based Asteroidz

A simple game based that works with a large number of users - scaling up as and when required to meet demand - across many different devices - mobile phones, tablets, laptops or desktops - through the device's built in browser, and also working in realtime, or as close to realtime as possible.

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Christopher Young

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Restaurant Management Framework

The framework technology aims to reduce costs in the day to day running of a restaurant, while providing a perfect and fast customer service.