UWE Bristol | University of the West of England

CREATIVE TECHNOLOGIES

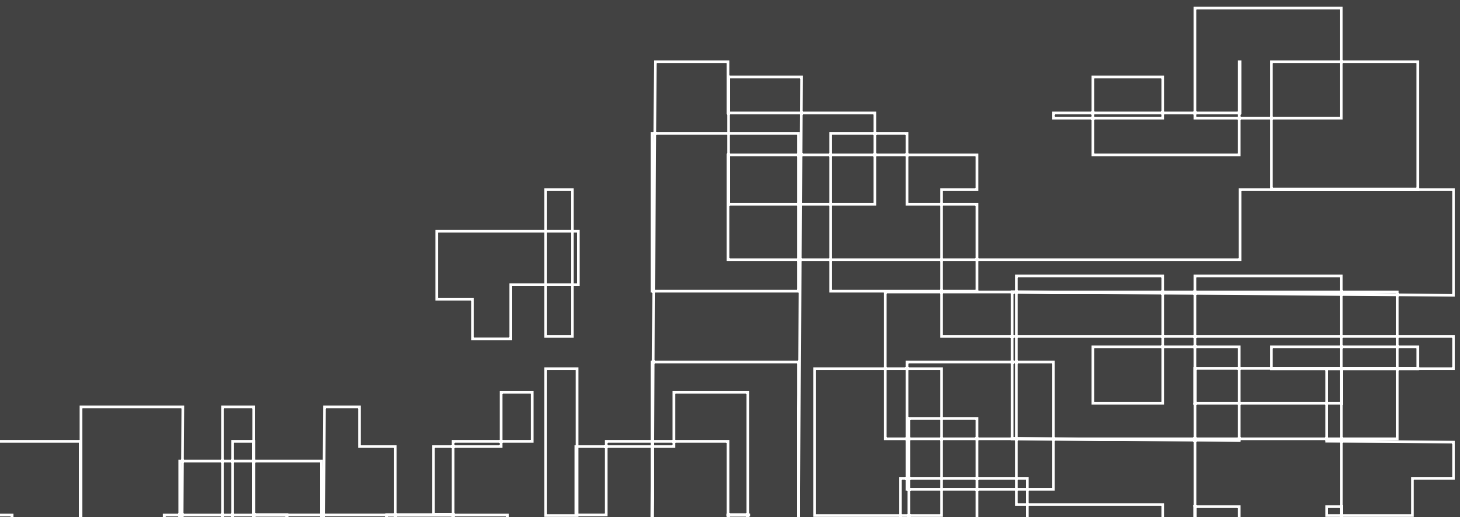
DEGREE SHOW 2018

Digital Media (BSc) // Games Technology (BSc) // Music Technology (BSc)

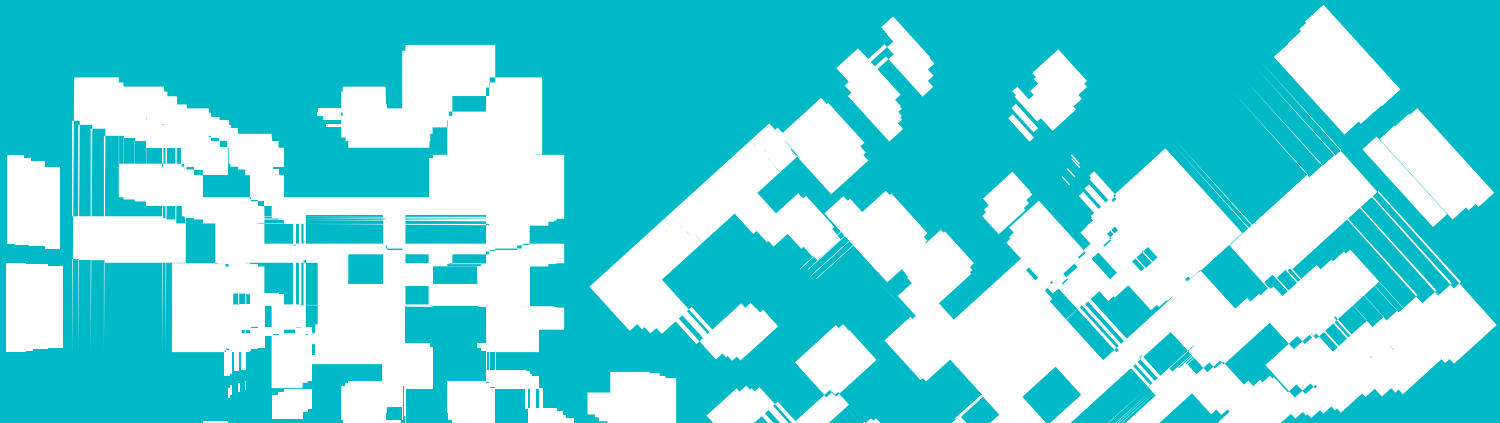

CREATIVE
TECHNOLOGIES

DIGITAL MEDIA

BSc(Hons)

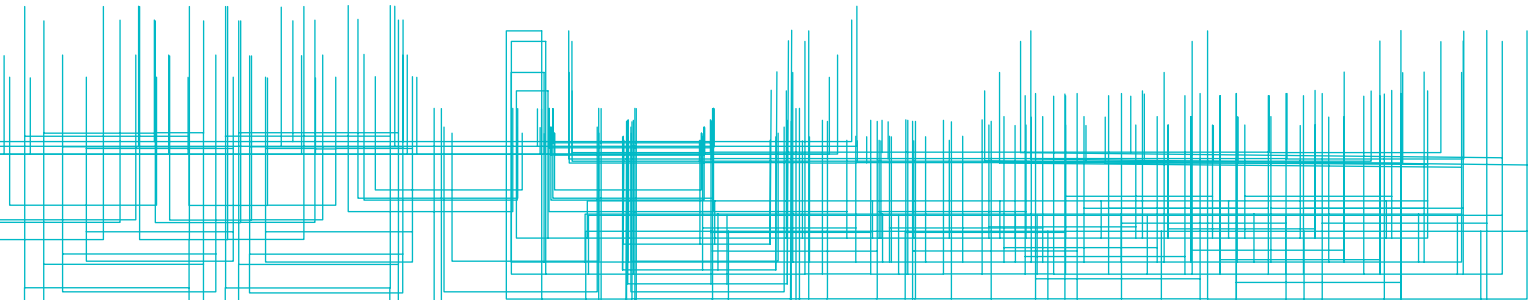


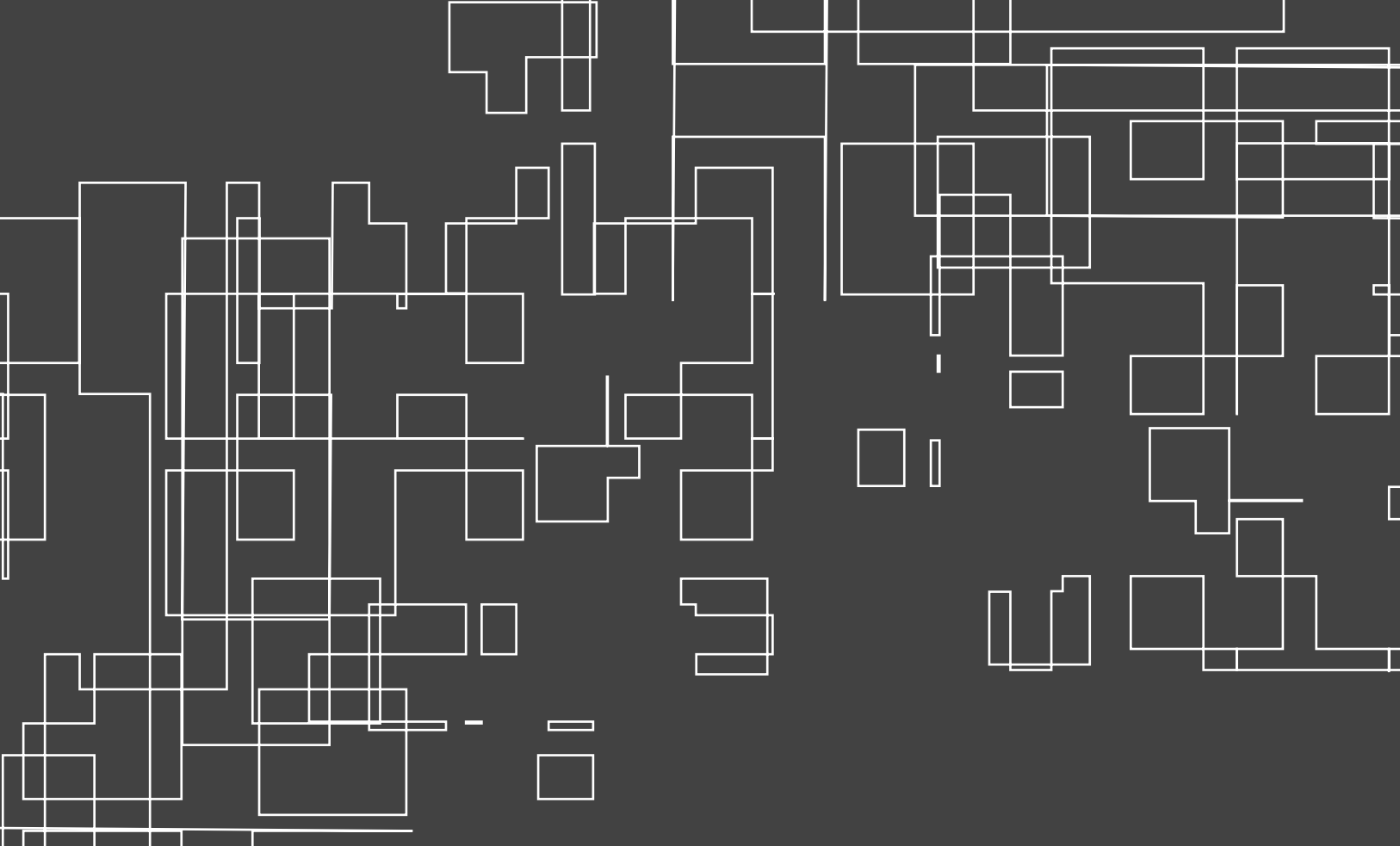
GAMES TECHNOLOGY BSc(Hons)



MUSIC TECHNOLOGY

BSc(Hons)





Digital Media

Digital media **use is growing, ranging from screen-based systems** and physical interaction to urban social networks and mobile commerce in the developing world.

Design principles and **delivery** technologies **underpin** how we make and interact with creative content in an increasingly ubiquitous digital world

There's also a growing demand for content creators and professionals who understand the digital landscape.

Digital Media

Digital Media

MAX ADAMS

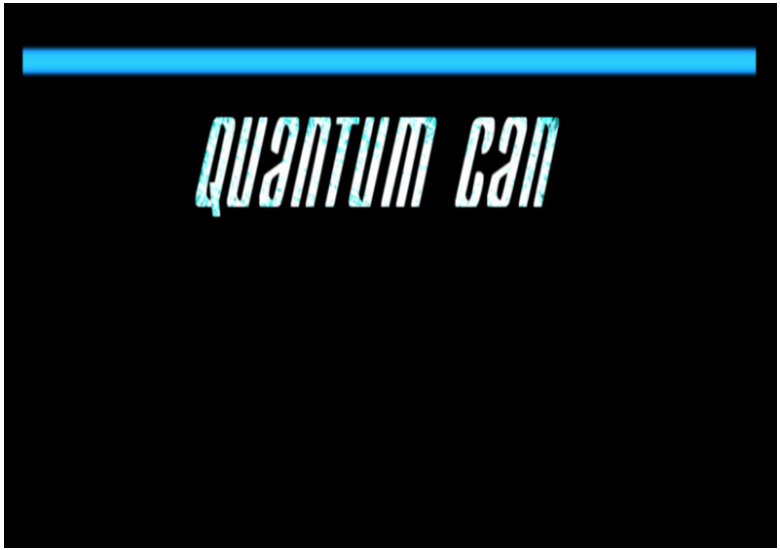
Digital Media (BSc)

Having pursued education around Computing for the last decade, this final year project has utilised my skills developed throughout this UWE Bristol Digital Media course. The artefact which I have produced has been informed by researching historic and current examples of audio visual performances, as well as making considerations in such professional areas including user experience, multimedia development and web design. I have found that making this web based EP has helped me to develop relevant skills to continue a career in audio and visual production.

GitHub: /maxadams97/fault

FAULT - AUDIO VISUALIZATION PROCEDURALLY GENERATED FROM AUDIO ANALYSIS DATA.

Fault is a web-based audio visualizer created for my Creative Technologies Project. The purpose of this site is to showcase and promote my music production by creating a unique audio visual style. An accompanying report provides an account of the creative process I took part in by analysing my practice in reference to resources used and articles which support my findings. I will be highlighting areas of the project's production and evaluating the outcomes suitability in the context of audio visual production.



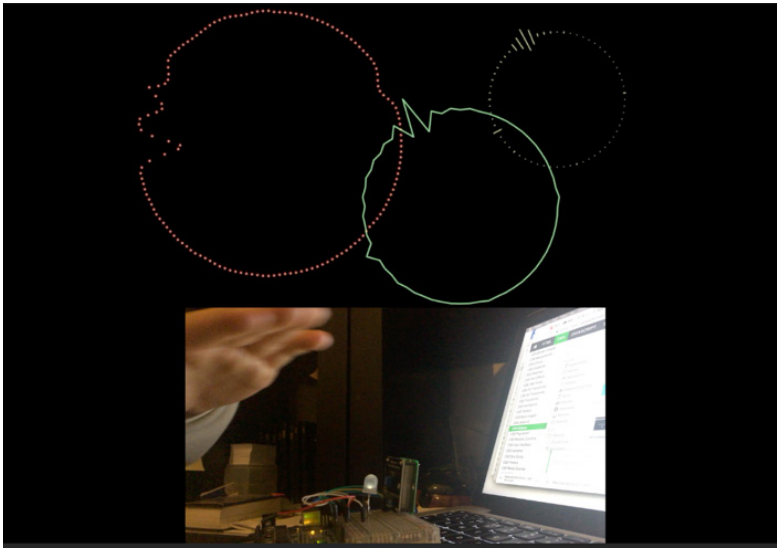
AZAZ AFZAL

Digital Media (BSc)

My main interests for my career are 3D technologies, product design and video production, despite the project briefly relating to my career, the part I learnt about it was user testing the product and getting feedback so that more features would be implemented thus more thought put into it, this would help in my career in terms of problem solving and showing some of the technical skills behind my project.

QUANTUM CAN.

For my creative technology project, I decided to create an interactive text based adventure game called “Quantum Can”, utilising C# coding it incorporates a scoring system that depends on the player’s choices, which can also add or deduct points, also as the name of the game suggests, it will have a countdown timer. The player with the most points that can beat the timer will have their name on the scoreboard.



ALEX BLOOMER

Digital Media (BSc)

AirTunes, as a final product, is an application along with a motion controller which can be used to create music. It uses a motion sensor as a controller to control audio visual effects created from a webpage, to give a pleasing visual representation of the music you create. Beginning with an Arduino model, this was the best option for me, as there are numerous tutorials and helpful guides online for this. There are also Arduino kits available to hire from our University which helps lower the cost of my project. After conducting my research, after researching several devices I found out that the certain ones I need are a Parallax x-band motion sensor, an Arduino Uno, Max 7 and Ableton live.

AIRTUNES - AUDIO VISUALISATION.

Air Tunes is an application which provides audio visualisation when creating music from a motion controller, it uses relevant code to connect the Arduino to HTML and implement a 'hands-free' musical instrument. I used HTML 5, CSS, Arduino, Involt and Adobe After Effects. It didn't all go to plan as expected but I mimicked the actions of what would have happened.

TOM BLUNDELL

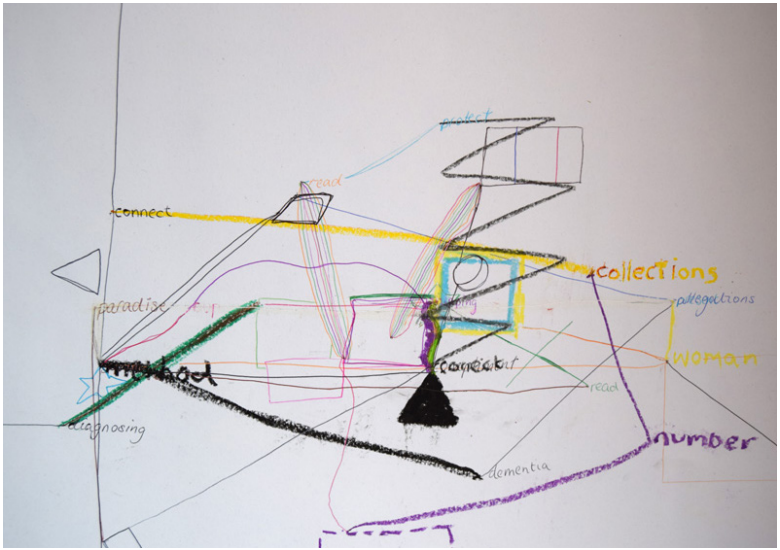
Digital Media (BSc)

I have a strong interest in graphical design more specifically user experience and user interface design. Through “Stadium Tracker” I will develop my knowledge of visual design gained during a summer work placement and be able to take the usability principles towards my “Digital Conncections” module in the MSc in Creative Technology at UWE Bristol starting in September.

GitHub: /twblundell/FinalArtefact

MOBILE APPLICATION PROTOTYPE AND USER-CENTERED DESIGN.

“Stadium Tracker” is a proof of concept prototype mobile application and user-centred design project. Using Android Studio I have developed a prototype application using Java intent for a GIF Splash Screen and Java Checkboxes to update a Progress Bar, the check box add together in a variable before setting the progress bar value. I have learnt using consistent and familiar interface elements through user principles focusing on structure, simplicity, visibility, feedback, tolerance and reuse I have ensured efficiency and user satisfaction.



IWAN BROCK

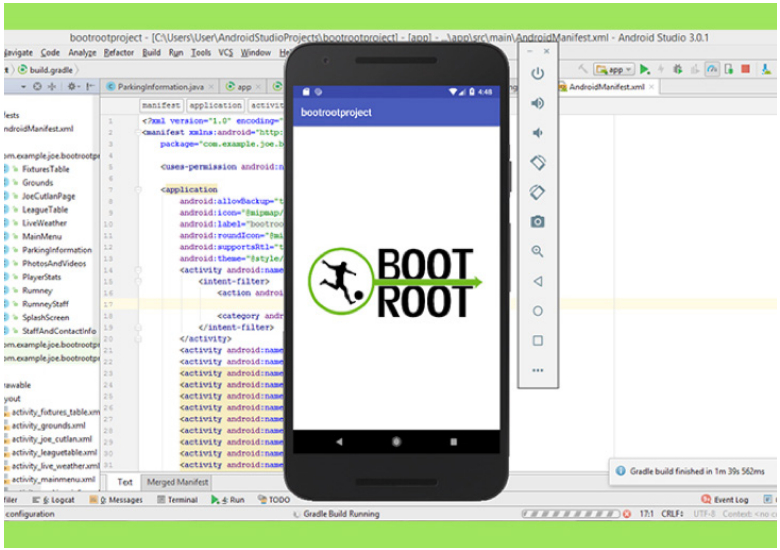
Digital Media (BSc)

Iwan Brock is an artist who works creatively with technologies to generate 2D artworks. Working with various techniques such as the creation of process based artmaking systems, such as described in this report, or more traditional design work in Photoshop or drawing.

GitHub: /iwanbrock/ctp

REVERSING THE ROLE OF HUMAN AND MACHINE IN THE CREATION OF GENERATIVE ART.

This project involved the creation of a generative art system, which transforms daily news into instructions to be interpreted by an artist. The result of this being a drawn visible outcome. Natural language processing methods are used upon the news data during the formation of artistic instructions. This project aims to consider the changing relationship between humans and computers by moving the creative agency in the artmaking process; having the computer instruct the artist.



JOE CUTLAN

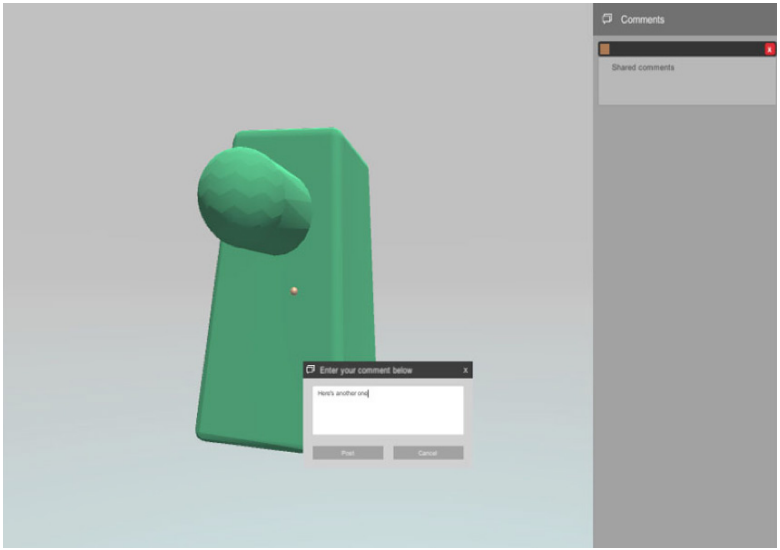
Digital Media (BSc)

BootRoot is a project inspired by my passion for football. Football is a sport I have been involved with throughout my entire life, whether it's following a team or playing in a match. The project connects both my sporting and IT interests and is revolved around mobile applications with some front and back end web development. These are subjects I am highly interested in and may pursue in a future career.

GitHub: /jdcutlan/bootrootproject

BOOTROOT - SUNDAY LEAGUE APPLICATION.

The BootRoot project is a Sunday League application developed using Android Studio. By using technologies such as Java and XML the user can interact with features such as the league standings and player statistics. This is made possible through the 'webview' feature that previews a PHP webpage stored on a server. This PHP webpage displays data in a graphically pleasing manner that pulls data from a MySQL database using SQL queries.



ALEX DAWSON

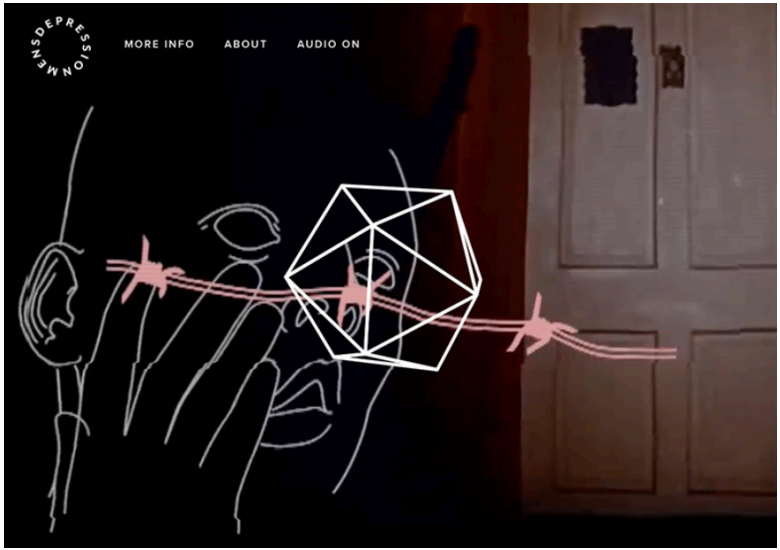
Digital Media (BSc)

Ever since I finished working on Microsoft's Paint 3D for my placement year I have been interested in working with 3D, especially in the way that we can use 3D content to improve our everyday tasks. With the increased accessibility of VR and AR, I have been keen to educate myself in this newly exposed avenue so that I can return to the field with a wealth of knowledge and experience.

GitHub: /dawsydaws/Shar3D_Space_Desktop_Prototype

SHAR3D SPACE - COLLABORATIVE 3D MODEL VIEWER AND ANNOTATION TOOL.

Shar3D Space is an exploratory project that seeks to facilitate and explore design discussion through the process of adding contextual notes to 3D objects within a Shared Virtual Environment. The project includes two prototypes: a networked desktop version that implements the leaving of said contextual notes, and a mobile version that explores how the process can be enhanced using Augmented Reality (AR).



NICHOLAS GARRATT

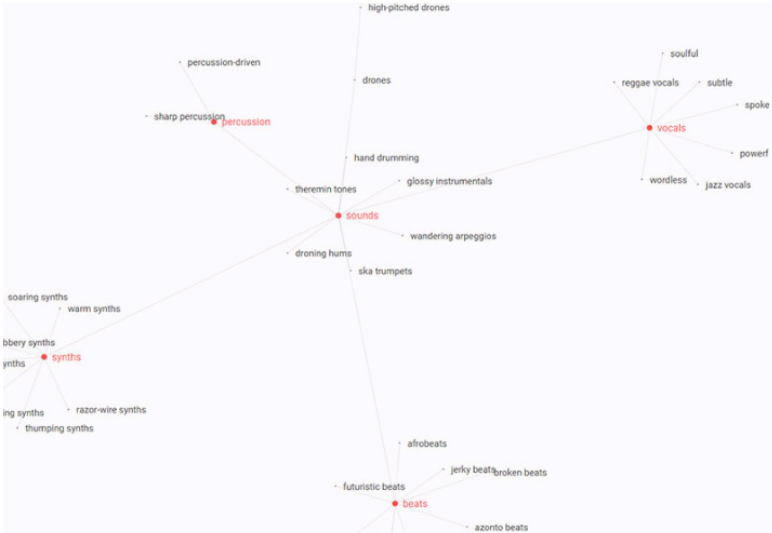
Digital Media (BSc)

My passion for visual design drove me to focus on a design heavy project, combining this with tackling depression, a cause close to my heart, encouraged me to push the boundaries of experimental interfaces and design in this project. I plan to pursue a career in digital design, so this project allowed me to build on my weaker HTML5, CSS3 and JavaScript skills as well as my already strong design experience.

GitHub: /garrytheratt/CTP

A MICROSITE FOR AWARENESS OF MEN'S DEPRESSION.

This project aims to raise awareness of depression amongst men and the issues surrounding it. Executed through a 'microsite' style web application featuring an abstract visualisation of its effects and symptoms, controlled by an experimental Three. js 3D interface, the web app seeks not only to educate but to encourage a deeper understanding through empathy. This report delves in to the design decisions and technical challenges of the project before evaluating the journey and deciding its success within a wider professional context.



ELLIE GILLESPIE

Digital Media (BSc)

Eleanor Gillespie has interest in multiple fields of web development, from UX and UI design to coding. This project was a chance for her to further develop these skills which she could then utilise for further work in her career. Additionally, her interest and desire to work within the music industry in the future inspired this project, as it allowed her to carefully study music categorisation and build and improve on current music streaming platforms.

Website: **www.serentu.live**

GitHub: **/eleanxrg/serentu-ctp**

SERUNTU - A LIVE MUSIC DISCOVERY PLATFORM.

This project proposes a novel way for people to search and explore live electronic music streams, whilst also providing a platform in which artists can broadcast their mixes live. Using React.js, a high-fidelity prototype has been developed to communicate the platform effectively. Derived from contemporary modern discourse and thematic analysis, a new library of search terms and keywords has been implemented, displayed visually by a D3.js force-directed graph.

ELEANOR JOHNSON

Digital Media (BSc)

Experiencing close family members experience heart attacks is what lead me to this project. This user-centred research project allows me to demonstrate my skills and interest in user experience; enabling me to further explore persuasive design that I had touched upon in my Second Year User Experience module. The technical element of the project allowed me to expand my coding skills to compliment my research and UX design skills.

iTunes: /gb/book/good-heart-guide/id1373864026

THE GOOD HEART GUIDE IBOOK.

The Good Heart Guide is an iBook that has been created to aid those who have suffered a heart attack or a heart condition diagnosis. It aims to help them when they have to change their eating and exercise habits and enter into a new healthier lifestyle. The book has been informed by research and feasibility studies with a range of participants. In the book, persuasive design principles have been used to encourage the user to adopt this new behaviour.

AGNIESZKA MATUSZAK

Digital Media (BSc)

I am a BSc Digital Media student graduating in 2018, with an interactive SVG animation application developed for my final year project, which has expanded my creativity, organisation and planning, and graphic design and coding skills. With a passion for graphics and websites, I develop digital content for the Web and would like to continue doing so for my career. With the life-long learning process involved in constantly developing technologies, I am excited to continue improving my JavaScript, PHP, etc. skills, for the best quality of outcomes.

Website: go-for-globe.000webhostapp.com/#0
GitHub: /agnieszka2/repo-for-go-for-globe

GO FOR GLOBE - INTERACTIVE SVG ANIMATION APPLICATION.

Go for Globe is an interactive SVG animation application, successfully educating about greenhouse gas emissions over an efficient application. The numerous content spread across scenes represents different atmospheric levels. Visuals and texts animated with CSS3, SASS, SMIL, and jQuery, along with live data images, describe Earth's warming process, helping to portray the affects on its inhabitants and nature. The application can be explored through HTML5 and JavaScript buttons, loading new scenes and enlarging their sections. Further interaction is achieved in a questionnaire, where answers change the mood of the animations.

BEN MOLYNEUX

Digital Media (BSc)

As an avid gamer I've always had an interest in how games are created and really enjoyed my course modules working with the Unity game engine. With this passion and the desire to learn more I managed to receive a placement working at UNIT9 as a junior Unity developer. This was where I was first exposed to working with augmented reality and where I was inspired to create my own augmented reality game to learn more about developing for this new technology.

GitHub: /bnmlynx/TrumpsFallout

SYSTEM FOR THE IMPERFECT DISSEMINATION OF INFORMATION.

Trump's Fallout is an augmented reality game for mobile that uses the devices camera to position radioactive targets of Donald Trump's head into the real world around the player whilst they try to keep the total radiation below a critical level.

This project was an exploration of the techniques involved in creating these types of experiences as well as answering why Pokémon GO was such a success.

LOUIS REED

Digital Media (BSc)

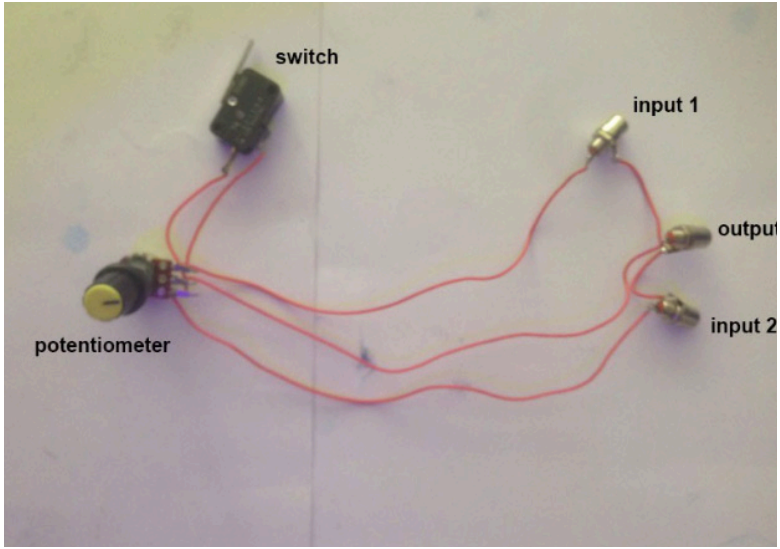
My sense of motivation for this project stemmed from a personal interest into the Platonic solids and other sacred forms. In recent years I have implemented a lot of inspiration from the golden ratio to my professional and university work. This project has allowed me to take the leap into mobile app development and has increased my C# programming skillset.

Website: **www.louisreed.co.uk/platonic-reality**

GitHub: **/Louisreed/platonic-reality**

PLATONIC REALITY - TEACHING GEOMETRY IN A VIRTUAL LEARNING ENVIRONMENT.

Research and development of a mixed reality (MR) geometry learning tool in order to see if virtual learning environments (VLE) provide a richer educational experience in comparison to traditional teaching methods. A mobile application has been created with Unity and Vuforia that allows the user to explore 3D geometry via Augmented Reality (AR). The app lists the mathematical information about the Platonic solids and their relation to the physical world by giving examples found in nature. Previous and current methods of visualising information are limited by the fact they only appear in two dimensions, with AR technology it is possible to allow the ability of viewing the world with another dimensional perspective.



MAX SAILLARD

Digital Media (BSc)

From a very young age, I have always been interested in technology and media. A few years ago, I discovered the world of “glitch art” (digital or analog corruption) and started researching different techniques in this particular field. This lead me on a course of exploring the realm of “glitch art” by looking for ways in which to purposely corrupt signals or data within an electrical system in order to create a specific result. Eventually, I gained enough knowledge to be able to create my own analog “glitching” device that I developed for this project and implement it within an interactive installation.

ANALOG ‘GLITCH’ INSTALLATION (WITH CUSTOM-MADE VIDEO MIXING DEVICE).

In this report I will be discussing my deliverable for the Creative Technologies Project: An immersive installation portraying “glitch art” as a creative output. Using a custom-made video mixer specifically designed for this project, alongside various other equipment (cameras, VHS player, monitor) arranged in an analog circuit – the user will have the ability to interact with the components of the installation in order to create a unique aesthetic output.

SAM TUCKETT

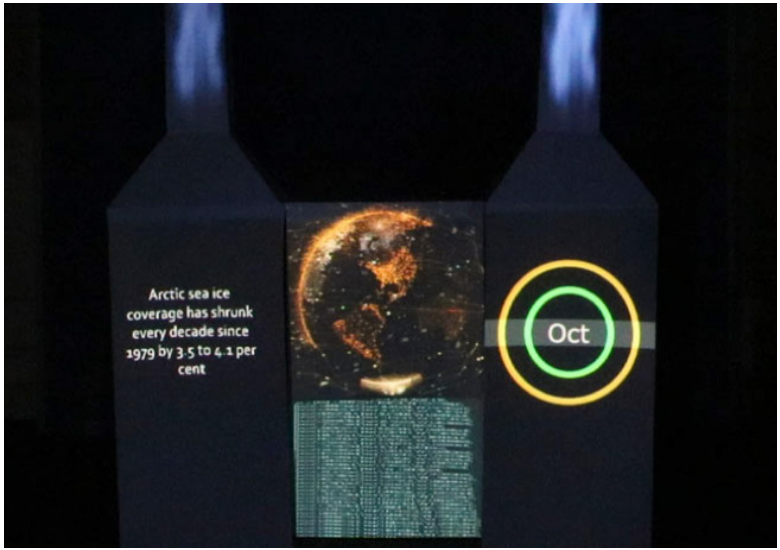
Digital Media (BSc)

I am planning on pursuing a career in user-centered design and mobile application development. One of the main reasons for undertaking this project was to help me excel in my areas of interest, which happen to be mobile application development, exploring different research methods, prototyping, UX and UI design. These areas are most important to a career in mobile application development and persuasive design, therefore specific skills such as UX and UI Design is why I decided I would further my skills.

GitHub: /imstuckett/WingMan

WING MAN.

Wing Man - “A role that a person may take when a friend needs support with approaching potential sexual or romantic partners” (T. E. DiDonato, 2014). Wing Man is a user-centered design project which aims to provide all students of Bristol with a mobile application to aid them in planning a night out with their friends. The application is being developed using Xcode and the coding language Swift 4.0, and can be deployed onto any Apple device running the latest iOS version (11).



DAN WALDRON

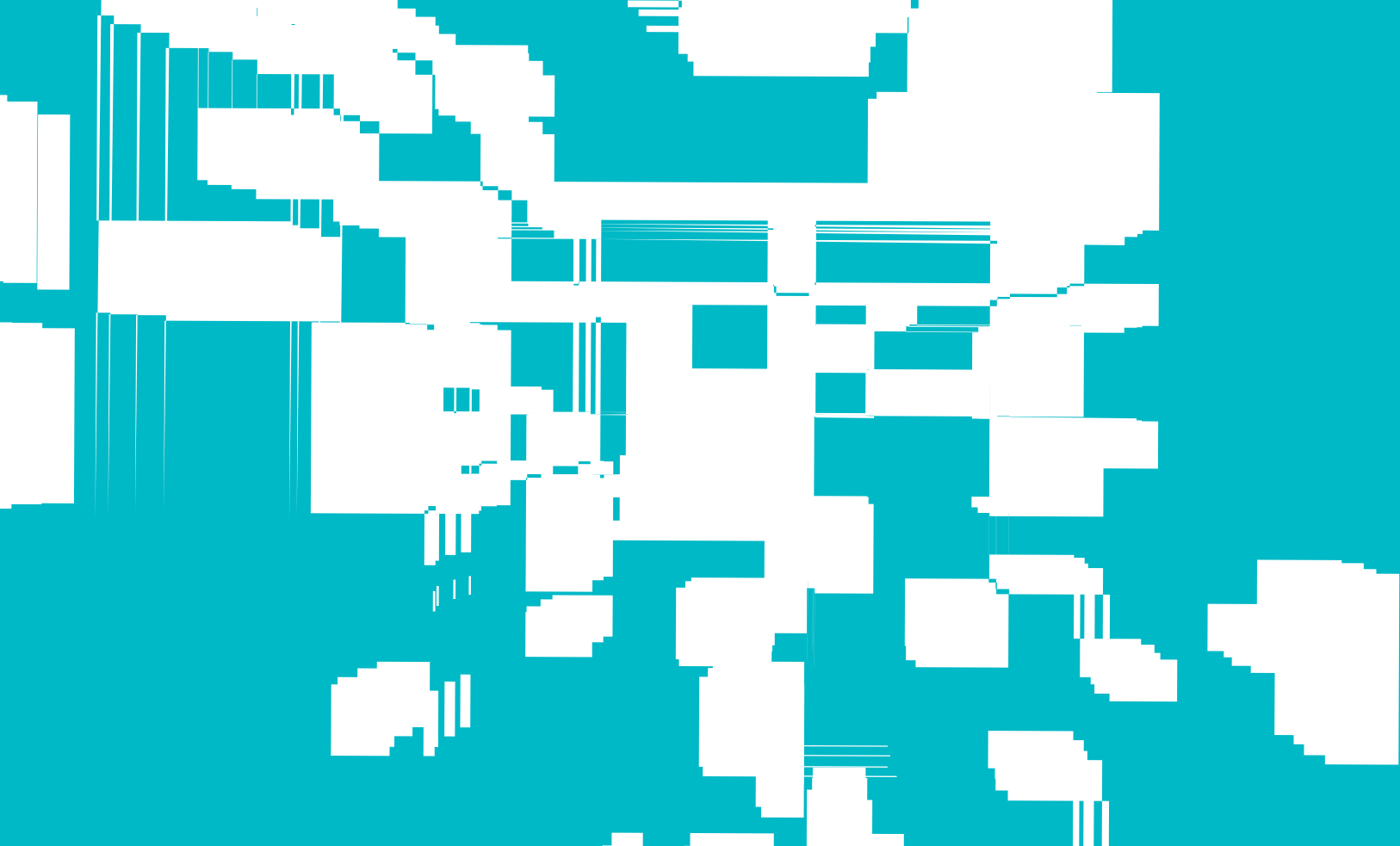
Digital Media (BSc)

My interest in the visual side of the creative industries was my main drive for picking this project. Most of my previous work consists of photography and video production, although I have undertaken various projects at university that I have enjoyed involving UX, web design and multimedia production. I feel this project has helped towards my future career in the creative industries as I have had the opportunity to learn a range of new visual skills.

YouTube: /watch?v=K1hk_dCYy4s

EXPLORING PROJECTION MAPPING.

This project is focused on exploring projection mapping technology, by practising the different tools and techniques used in industry to map content on to 3D objects. I have explored projection mapping through using it to map content based on the specific subject of climate change awareness. The 3D model I have created for the focus of the mapping is a scaled down model of Battersea Power Station.

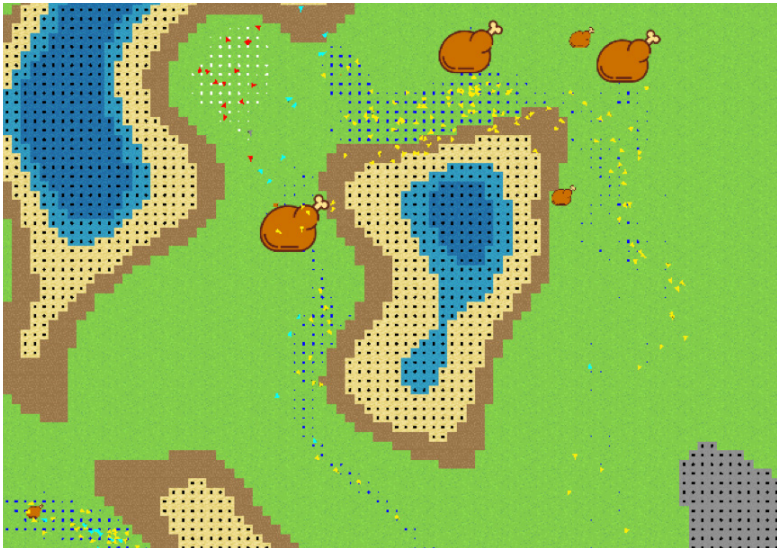


Games Technology

As well as providing entertainment, games offer creative ways to engage with content.

With new and exciting game applications in public services, education, business and healthcare, there is growing demand for professionals who can apply games concepts across a range of industries.

The need to facilitate this - along with the evolution of the internet, multimedia and mobile devices - has led to significant growth in the games industry.



HARRY ALCOTT

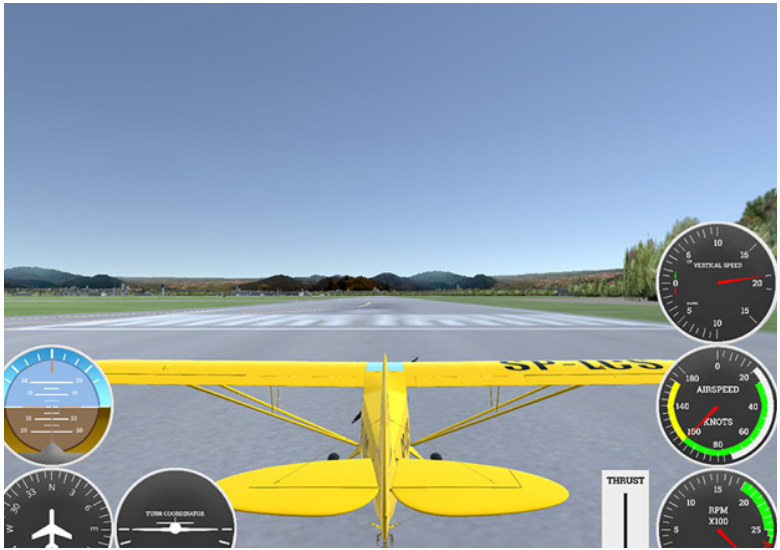
Games Technology (BSc)

Harry Alcott was born in 1995 and currently resides in Bath. He is studying BSc Games Technology at the University of the West of England. He has been interested in biology and computer sciences for a long while. He chose to develop an ant simulation because he was interested in how such basic insects, such as ants, could form such complex communities and achieve amazing feats despite their simple nature, by working together.

GitHub: /harryxa/2D-Ant-Sim/tree/Pheromone-Node-Changes

SIMULATING EMERGENT BEHAVIOUR IN AN ANT COLONY.

The report investigates the implementation of a simple ant-like artificial intelligence and emergent behaviours that may arise as a result. The system developed showcases these desired emergent behaviours that come about through the interactions of less complex agents. Although the agents have no instructions to optimise routes, it emerges naturally as agents collectively gather food and communicate with one another via pheromones.



LESZEK BAGNUCKI

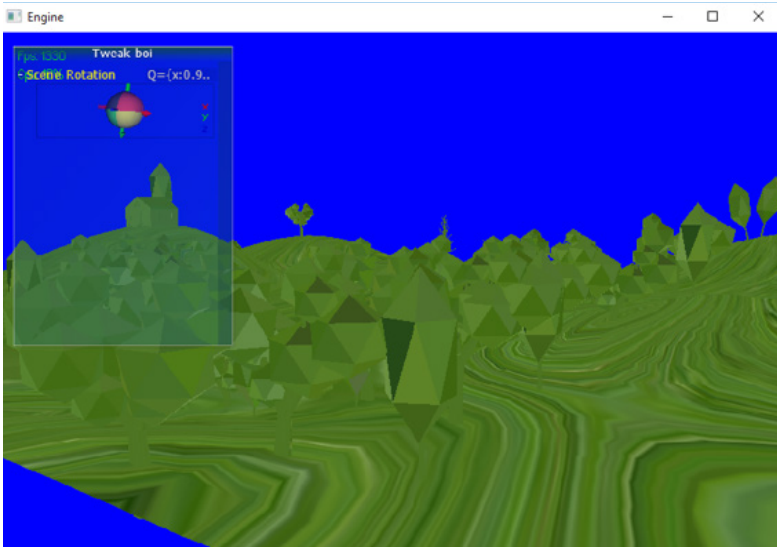
Games Technology (BSc)

My main areas of interests in game development are vehicle programming and the real-life representation of physics. I have learned about them, while working on the Speed Titans video game, which features building a land-speed record-breaking vehicle out of various parts, including jet engines, wheels and wings.

GitHub: /med1337/CTP_14038283

HIGH-PERFORMANCE AERODYNAMICS LIBRARY FOR A COMMERCIAL GAMES ENGINE.

The initial purpose of the project was to produce a high-performance aerodynamics library for a commercial games engine. Due to the complexity of the problem, the project ended up being more about the research and investigation into implementing realistic aerodynamic behaviour for rigid bodies in the Unity Game Engine. The accompanying report describes the principles of aerodynamics affecting an aeroplane, provides a valuable insight and recommendations based on encountered issues. The outcome of this project provides a basic flight model, which features some of the aerodynamic behaviours. It also consists of a simple UI, with mostly working flight instruments.



JAMES CLARK

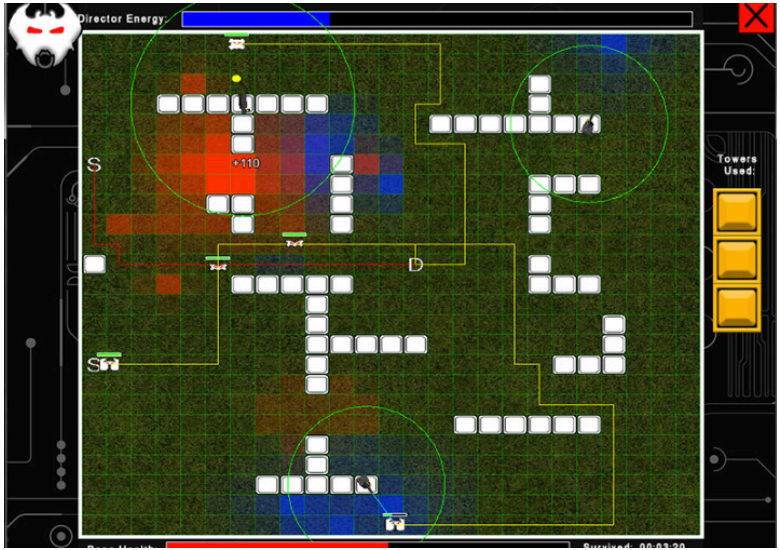
Games Technology (BSc)

I wanted to do this project as I was already slightly familiar with DirectX and wanted to explore its use. I also felt that the rain and puddles would allow for some artistic influence which is something I also wanted to explore.

GitHub: /jm4-clark/CTP

RAIN AND PUDDLE SIMULATION ON THE GPU.

This project is a simulation of rain based on the GPU in DirectX 11. The project is not yet complete, but it has set out a decent amount of the basis to finish the project.



JOE DA SILVA

Games Technology (BSc)

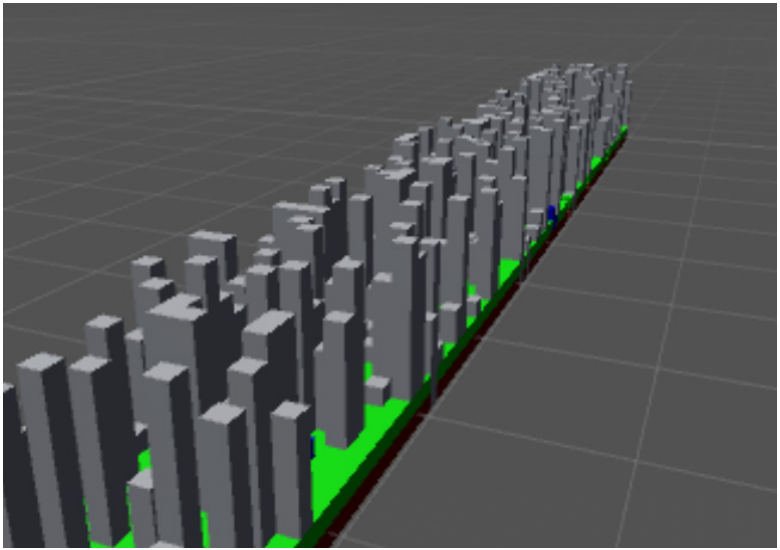
This project served to strengthen my programming skills in C++, deepen my understanding of pathfinding algorithms, and test my abilities to produce a comprehensive and enjoyable gameplay experience from a low-level starting point.
As an aspiring gameplay programmer, this project has been invaluable in developing my professional skills in relation to gameplay and level design, iterative development, and project management.

GitHub: /Jdasi/TDHP

USING RUNTIME ACTIVITY HEATMAPS TO DRIVE INTELLIGENT AI BEHAVIOUR IN TOWER DEFENCE GAMES.

This project presents a 2-Dimensional (2D) Tower Defence (TD) game, in which the opponents use Artificial Intelligence (AI) to navigate the level and make tactical decisions to overcome the actions of the player.

Information is recorded at runtime from game events, which assumes the form of a heatmap. This information then influences the pathfinding logic and decision-making capabilities of the AI systems to produce more dynamic and strategic results.



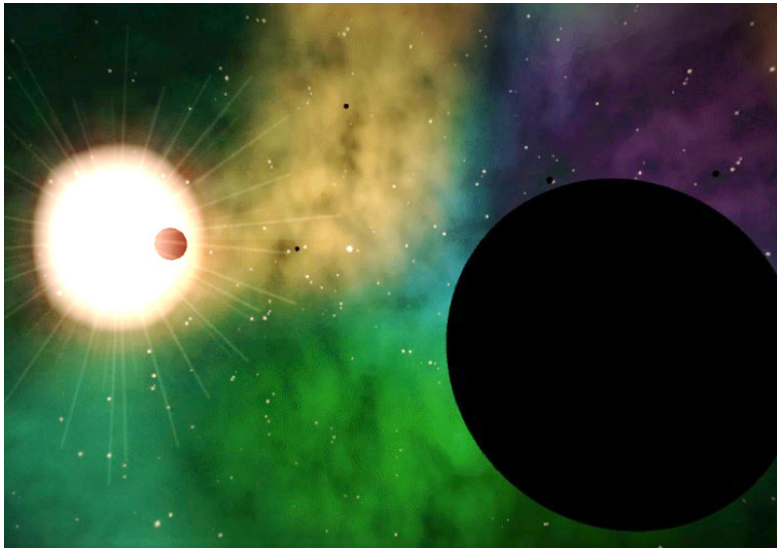
DUDLEY DAWES

Games Technology (BSc)

I am a creative. My passion lies in project management, gameplay programming and automation, amongst other things. This project was an opportunity to find established structures in music, films and games, and use them to automate level design. I hope this research will give other developers a new angle to view the creative process of level automation, as it did for me.

INVESTIGATING AUTOMATED LEVEL DESIGN.

This project investigates multiple automation techniques for level design through the implementation of different prototypes. The types of techniques are influenced by art, narrative structure and other non-game forms of media, as well as taking inspiration from game related level design theory and academic research. The project finds that these techniques, when used to structure levels, are a powerful tool for learning and searched based level automation.



DANIEL DONALDSON

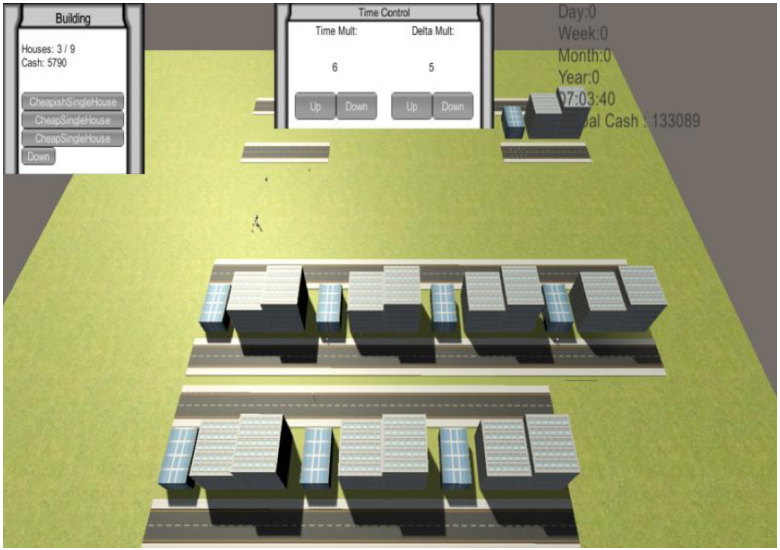
Games Technology (BSc)

I have always been fascinated with video games and science, particularly astrophysics. As a Games Technology student I have created environments, which allow users to gain new experiences through exploration of worlds dissimilar from their own. Moreover, whilst also viewing games as a powerful platform for learning. This project acts as conduit for users to not only create, but also fosters learning through the use of real-world astrophysics principals.

GitHub: /Batdan94/Eclipse-Engine

CREATION OF PROCEDURALLY GENERATED UNIVERSES BASED ON REAL-WORLD ASTROPHYSICS PRINCIPLES.

This project examines the realistic principles of current space exploration and space simulation programs. The project uses the Unity 5.6.1f1 engine to create an interactive system in which users are able to create procedurally generated planets and solar systems, in addition to other galactic bodies. By utilising current theories of galactic behaviour, these created bodies are then acted upon by forces and variables within their solar environments.



JOSH FENLON

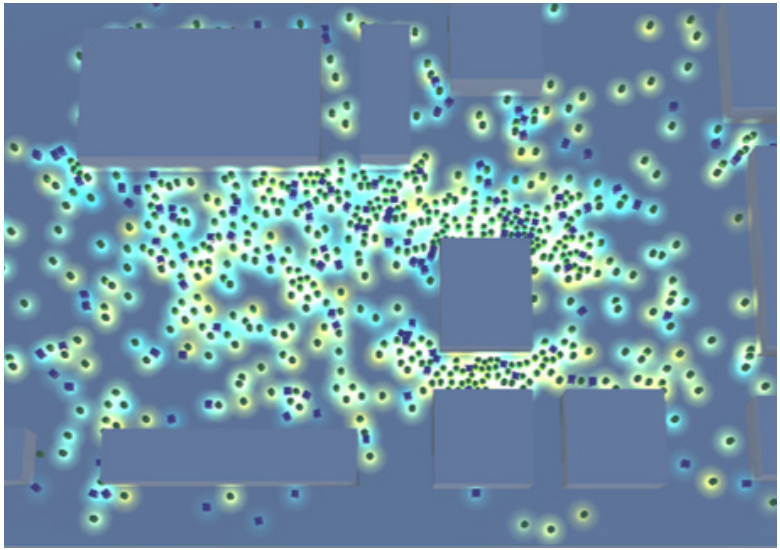
Games Technology (BSc)

This type of project has been a key interest in my development as a games programmer, for as long as I can remember I have always dreamt of having a world populated by intelligent AI actors that a user could interact with and I have attempted to further my ability to understand and produce AI systems over my years as a student by tackling many different AI-based tasks anywhere from squad-based controllers to navigational systems for AI.

GitHub: **/joshf67/Dissertation**

CREATING AN INTERACTABLE CITY SIMULATION USING AI.

The software created during this project will allow anyone to place an object within a world/scene and have that object interact with other objects around the world in a human-like manner, this includes acting out daily activities such as working, travelling and sleeping. This project also includes a system to allow a user to interact with the simulation.



CHLOE GOUMENT

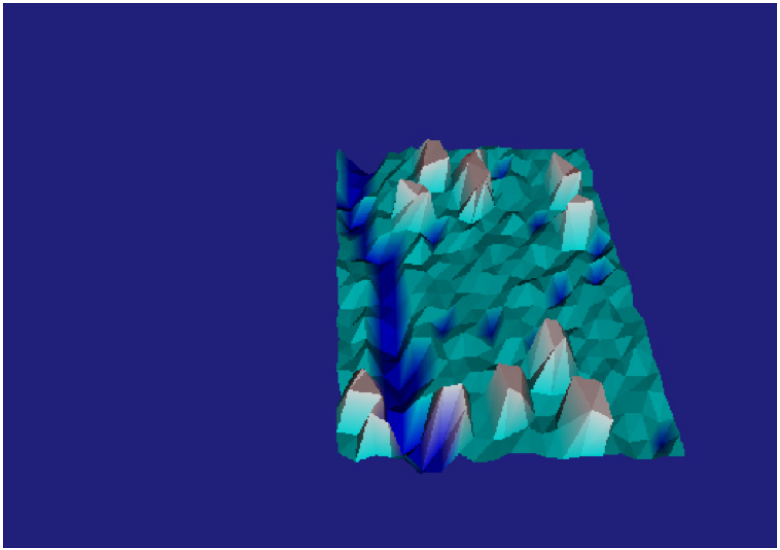
Games Technology (BSc)

I have always held a deep interest in artificial intelligence and communication. This project provided me with a way to further explore those interests in providing a way to model the spread of information.

GitHub: /chloe-goument/CTP-SIDI

SYSTEM FOR THE IMPERFECT DISSEMINATION OF INFORMATION.

A system for modelling the spread of information within game systems. SIDI provides a more natural way for information and states to spread through agents in video games by having them pass their own perceptions of an event between each other.



DOMINIC HAWKINS

Games Technology (BSc)

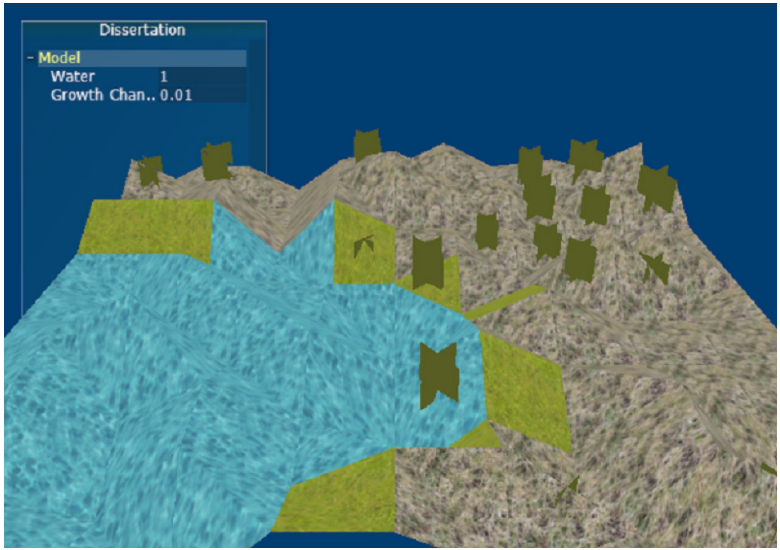
Dominic Hawkins was born in 1997 and lives in Bristol, United Kingdom. He is currently studying Games Technology BSc at the University of the West of England. He has interests in games programming and the creation of procedural terrain. The interest of procedural terrain led Dominic's interest into its implementation and what could be done to create them.

GitHub: /D6-hawkins/15019335

PROCEDURALLY GENERATED CAVERN SYSTEM USING FLUID SIMULATIONS.

The aim of this project was to create a system that could create procedurally generated caverns using the marching cubes algorithm and fluid physics, however this outcome wasn't achieved.

The outcome of the system is a voxel procedural terrain generation system using the marching cubes algorithm, with the reasons and difficulties that resulted in the creation of this system detailed inside the accompanying report.



CHRIS HAMILTON

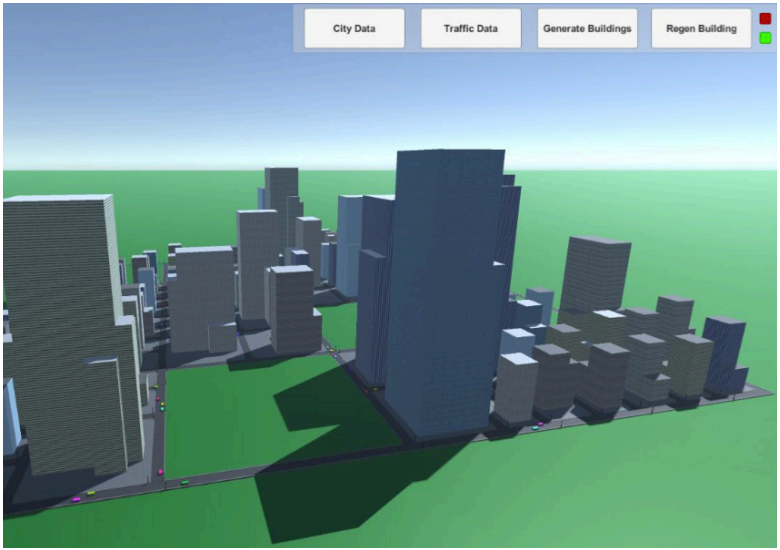
Games Technology (BSc)

Chris Hamilton is a student at University West of England, studying Games Technology. With a firm interest in methods used for generating worlds in video games, this project served as an opportunity to obtain experience within this area, while also providing the foundations to the necessities of world generation.

GitHub: /ChrisHammie/CTP-FinalProject

CREATING AN ECOLOGICAL SYSTEM USING DIRECTX 11.

This report details the findings and implementation of Creating an Ecological System using DirectX 11. This project was created using Visual Studio 2015, and aims to replicate the ecological relationship shared between a plant, and the ground it is located within.



SAMUEL HARDEN

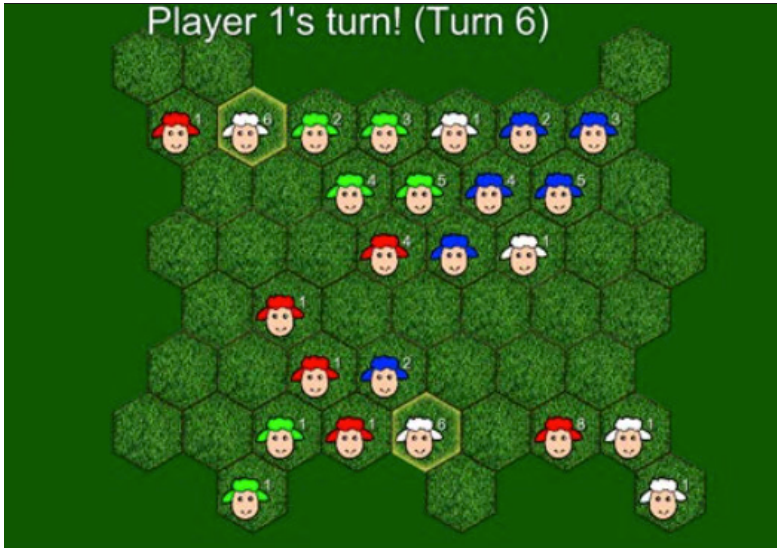
Games Technology (BSc)

The discoveries and achievements of a procedurally generated city for use in a computer game environment. The artefact produced is capable of generating a Manhattan style city with an artificially intelligent traffic simulation.

GitHub: /Samuel-Harden/CTP-Prototype-V2

PROCEDURALLY GENERATED CITY FOR USE IN A COMPUTER GAME ENVIRONMENT.

This project has been an exploration that has allowed for the discovery of knowledge in relation to the fields of procedural generation and artificial intelligence. These two aspects of computer games interest me greatly and it is my hope, that they will aid me in my pursuit of a relevant role within industry.



MITCHELL HEIGHT

Games Technology (BSc)

I chose this project due to little prior knowledge but extensive interest in artificial intelligence, specifically in games. My aim was to expand my skillset by attempting something traditionally considered complex that I had no experience with. As well as to facilitate whether artificial intelligence is the field of computer science I want to specialise in.

GitHub: /freakishhero/CTP

BATTLE SHEEP BOARD GAME AI.

The following project is an artificial intelligence (AI) that can competitively play games of a digitally recreated version of Battle Sheep. It combines aspects of different search algorithms using defined rules to achieve an end state in the most efficient way it knows; attempting to defeat two other AIs and a human player.

OWEN JACKSON

Games Technology (BSc)

My ambitions as a game developer are in gameplay programming - I want to be as close to the development of the mechanics as possible. I chose the subject of AI in games because it is more applicable to a wider context than specific mechanics, while still keeping me relatively close to the gameplay. This project has taught me a lot about how AIs in games are implemented and how machine learning could be used to enhance their behaviours.

GitHub: /Owen-Jackson/CTP-BT-and-RL

COMBINING BEHAVIOUR TREES AND REINFORCEMENT LEARNING FOR GAME AI.

This project is made up of a custom library for the production of behaviour trees and an accompanying prototype that makes use of the library. The library contains base behaviour tree functionality and an extra node type that performs Q-Learning during runtime. The base classes that the library contains are inherited from in the prototype to produce behaviours for an NPC.

MICHAEL JOHNSON

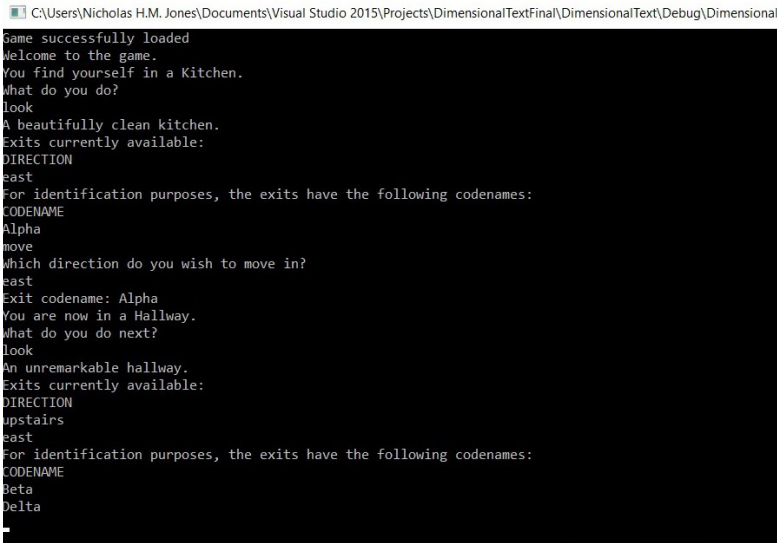
Games Technology (BSc)

Not being very confident in my programming abilities, I chose this project to challenge those abilities and to see how far I could push myself. As AI interests me it could prove useful in the future for potential career choices as well as giving me a basic understanding of techniques that could be improved upon in the future to further my understanding of AI.

GitHub: **/karvez/CTPRaceTrack**

PROCEDURAL RACETRACK DESIGN.

This project implements a Markov Chain algorithm and a Perlin Noise terrain algorithm, to create a racetrack that mimics a Formula One racetrack based on data from real Formula One racetracks, which is drivable and challenging to play for the user. The Markov Chain is used to 'learn' what a Formula One racetrack is, based on data scraped online for Formula One racetracks, then track piece objects are spawned to create the track in 3D space.



NICHOLAS JONES

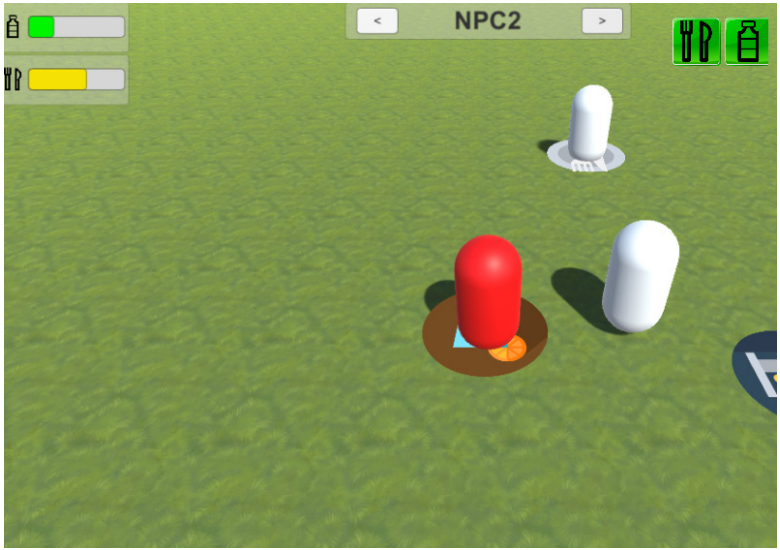
Games Technology (BSc)

I am currently looking to pursue a career in IT management and basic software maintenance. It is my hope that any relevant skills gained from this project will aid me in my desired profession, in particular database management.

GitHub: /GoodSirJones/DimensionalText

DATA-DRIVEN TEXT ADVENTURE ENGINE.

This project was intended to be a fully-fledged game engine for text-based adventure games, in a similar vein to existing applications such as Quest and Inform. However, difficulties encountered during the production process coupled with time constraints forced me to focus on making it a fully fleshed out text adventure game with elements of an engine instead.



ZBIGNIEW KAJOTA

Games Technology (BSc)

While working on this project I aimed to create a framework for a system which could be expanded over time. Gothic, a game by Piranha bytes was what inspired me to learn how games are made. To be more precise, it was Gothic's great illusion of living NPCs; working peasants, patrolling soldiers and experimenting mages. In many ways this project is sort of a tribute; a little seed which could plant my own version of Gothic. I was always inspired by stories of such games, especially considering that many (just like this one) were made by a few students after finishing their university degrees.

GitHub: /zkajota/Unity

SIMULATING ARTIFICIAL INTELLIGENCE IN THE CONTEXT OF NON-PLAYER CHARACTER BEHAVIOUR USING A COMMERCIAL GAMES ENGINE.

Solution achieved basic simulation of artificial intelligence by creating a data-driven system concentrated around a concept of constantly increasing needs, and corresponding actions which can fulfil them. The system allows for indefinitely long simulation and is easily expandable by further data-driven elements such as simple requirements. For example, time could be added so that certain actions, to provide context, eating or sleeping, could be performed at specific time frames.

PIOTR LUBINSKI

Games Technology (BSc)

I'm a huge fan of 2D platformer games, classics like Mario and Sonic but also newer games like Starbound or Broforce made me think how games like these are created. One of the many common things these games share, is the fact that they were all build using sprites and sprite-sheets. Quite recently I created a tile map editor and I believe it could benefit from a tool like this, which creates sprite-sheets that could be used as tiles in 2D games.

GitHub: **/P-Lubinski/Creative-Technologies-Project**

GENERATING SPRITE SHEETS USING AN ARTIFICIAL NEURAL NETWORK.

The idea for this entire project was to create a tool for games developers that would make their lives easier. This artificial neural network is designed to take in any picture, and recognise what is on that picture. Once objects on the picture have been detected and classified, sprites are picked to represent the objects from the picture, and then put together into a sprite-sheet ready for a level designer to use.

MAX MAGILL

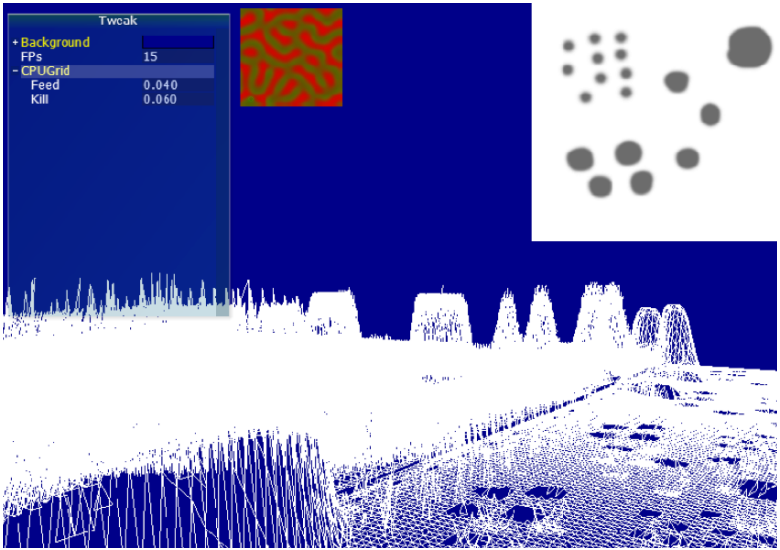
Games Technology (BSc)

Coming into the project I had some minor experience with digital twins and a good knowledge of game theories, but not necessarily what gamification meant. I was also completely incapable in SQL, not just the language but the creation and management of servers/databases. This project was designed and created in collaboration with the Advanced Manufacturing Research Centre (AMRC), a faculty of the University of Sheffield of whom I did a placement with between 2016-2017 and intend to return to after graduation.

GitHub: /Magillion/CTP-Digital-Twin

GAMIFICATION OF A DIGITAL TWIN.

This project explored the research and development of a digital twin agnostic system for gamification. The system was created using the Unity game engine, utilising MicrosoftSQL to store and process data. The agnostic system aimed to take metrics returned from any digital twin to create an optimal output based on the input.



HARRY MCALPINE

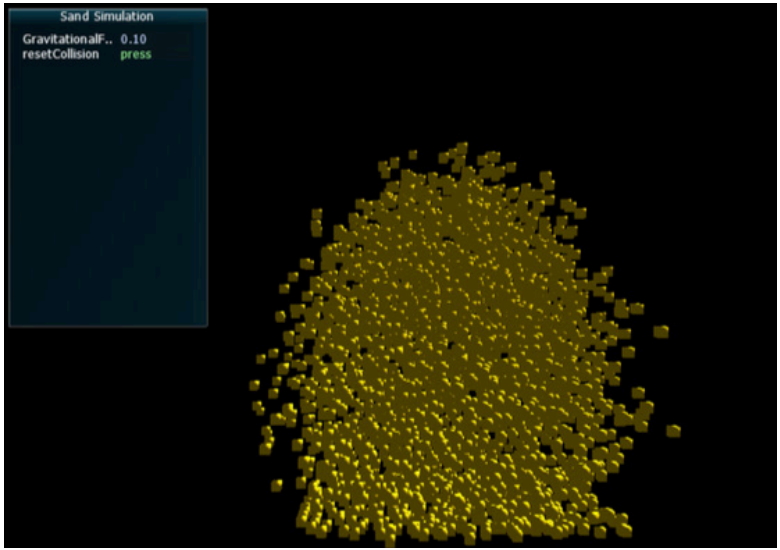
Games Technology (BSc)

Whilst I have a knowledge of modern games engines with pre-build low-level systems there is certainly a grey area surrounding low-level APIs such as DirectX and OpenGL, two of the most popular and powerful libraries for graphical programming. My personal goal was to get a better understanding of how these systems interact with shaders and how large-scale terrain is generated. As more games engines are being created and it is becoming easier to not have to interact with these APIs, so from a portfolio of work standpoint being able to produce something using them is a great enhancement.

BitBucket: /HarryMcAlpine/dissertation-directx-reaction-diffusion/src

2D REACTION-DIFFUSION TEXTURE AND TERRAIN GENERATION.

This paper aims to research and implement the Gray-Scott reaction-diffusion model (R. P. Munafo, 2014) in DirectX 11. This model can accurately describe the interaction between elements on a two-dimensional grid. The goal was to correctly create two sets of grids, one on the CPU and one on the GPU, however only the CPU was implemented and working. Another aspect was to then take this model data and create a three-dimensional terrain, the later was achieved but it only utilises a static image, however, the basis for dynamic terrain generation is implemented utilising dynamic vertex and index buffers.



BEN MEREDITH

Games Technology (BSc)

As a student intending to become a games developer, having a well-rounded set of programming and logical thinking abilities is very important. Physics simulations test these abilities and are very widely used in game development especially with the increasing need for highly realistic games. This project shows that I am capable of understanding and using physics equations and am able to apply/edit researched methods from other works to my simulations.

GitHub: **/Benedith/DissertationSandPhysics**

REAL TIME SAND SIMULATION.

This project is the creation of real time sand physics using a DES (Discrete Event Simulation) model and applying features of granular flow to optimise the project. This project is made to be easily adapted to simulate any granular material. C++ and DirectX's core libraries are used but no additional math libraries.

VIVIENNE NIP

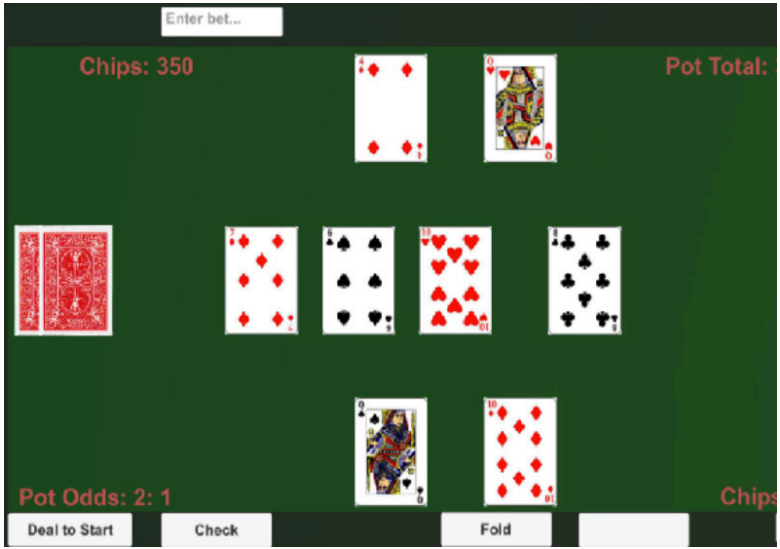
Games Technology (BSc)

My interest in video games, in particular multiplayer, casual games which require co-operation, inspired me to create a project which could include an 'infinite' amount of people to play together. It is my ambition to have a career in the video gaming industry making fun, multiplayer games where everyone can play with each other. I wish to go into Quality Assurance testing and then into Project Management with my wide range of skills. I believe this project will help show to possible prospects how enthusiastic I am about co-operative video games.

GitHub: /Vivinator/Hangman-with-Twitch

CREATING AN INPUT SYSTEM FROM TWITCH USER COMMANDS.

This project is an input system which works alongside a hangman game and the streaming website Twitch.tv. It was created in order to allow streamers to have their viewers play games with them using specific commands which could be adjusted depending on the game and on the streamer. It was created with C# within Unity and uses both a piece of streaming software and Twitch.tv.



STEVEN OLIVER

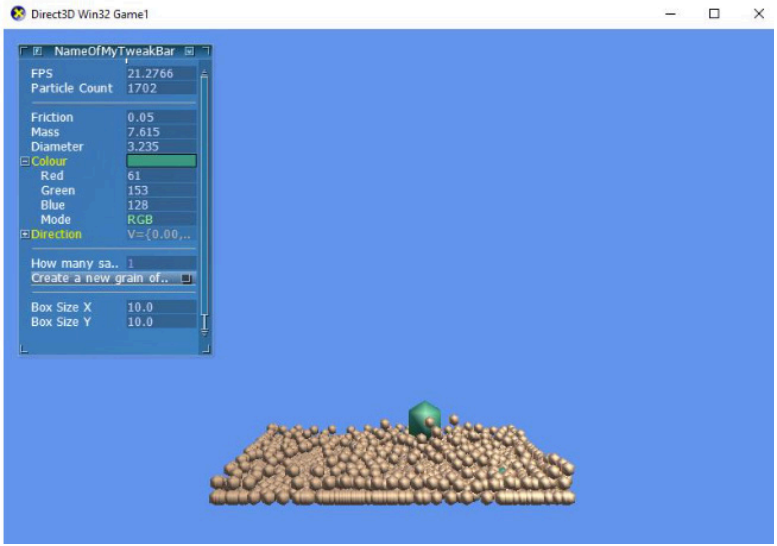
Games Technology (BSc)

This project was conceptualised from personal interest in playing poker, and was to be made in order to help learn about how to play the game to improve. As a topic that is also a hobby, ambitions were initially high, though became more metered, and skills going into development were not high enough to fully realise the conceptualisation. However, after development, those have improved and using this project as a learning experience will help to deliver future projects through to full term.

GitHub: **/SteveO32/CTPDissertationSteven**

DESIGNING A 2D POKER GAME AS A LEARNING TOOL WITH AN AI PLAYER.

This Unity 5.6.3f1 project is a 2Dimensional poker simulation game that is meant to act as a learning tool for a player of Texas No Limit Hold'em poker. Research and tools applied pertain to game logic implementation, encompassing the evaluation of a subset of a set of cards, game state implementation, implementing a modified version of the Fisher-Yates algorithm for shuffling through an array, creating learning tools and tips for the user through the use of a user interface (UI), and a framework that could be used to represent data to the user.



ALEXANDER PAGLIARINI

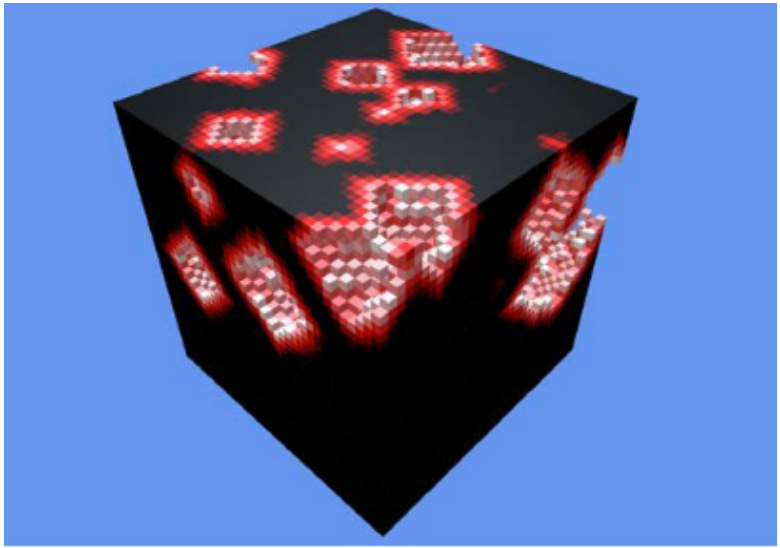
Games Technology (BSc) - 15012817

The project is heavily inspired by the Powder Game, mentioned several times throughout the paper. The original objective was to create a 3D modern updated version of the game, but as the research was concluding, I decided to make it based more generally on the concept of Granular Dynamics.

GitHub: /AlexPaggers/SandDissertation

SIMULATION OF GRANULAR MATERIALS USING VARIABLE ATTRIBUTES.

This report covers the exploration of which attributes affect granular dynamics and how we can emulate them. The software covered is an interactive 3D environment where the user is able to edit attributes of granules and create them in run time.



GUNDARS PELNS

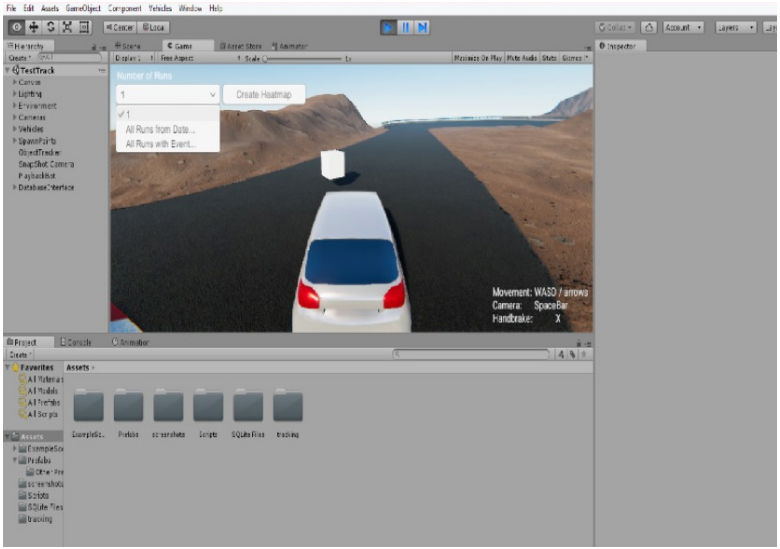
Games Technology (BSc)

The belief is that this project allowed further development in knowledge about the DirectX 11 engine, as well as the implementation of custom tools such as the DXTK. This project truly thought that logic and code optimisation created more of a interest than graphical implementation, thus further development will be made within this focus.

GitHub: /g2-pelns/CTP_FireSimulation

FIRE PROPAGATION SIMULATION USING GEOMETRIC CUBES.

A simulation of fire propagation over an instantiated object with a custom size, that burns and deforms as the fire spreads across the object, using voxel cubes (Geometric Cubes) as its mesh. Unlike a normal mesh however, this completely fills the object with burnable cubes, which use fire propagation calculations to spread across the whole object.



TIM PENFOLD

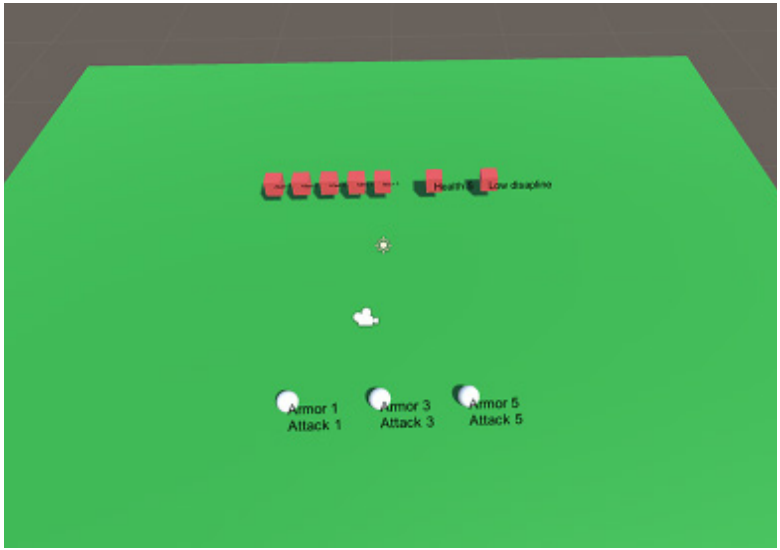
Games Technology (BSc)

I have had a desire to investigate the way players interact with games and how that information can be fed back to developers and utilised to improve the quality of games in both core design and technical polish. This toolset will aid in gathering important data on how users interact with the project and how changes can be made to improve the experience for users.

GitHub: /Tipe125/CreativeTechnologyProject

RECORDING AND VISUALISING OBJECT DATA WITHIN UNITY.

This project consists of a set of tools for recording, querying and visualising object data within the Unity game engine. This tool can be used to supplement quality assurance testing and gather data on how players interact with games to make improvements to the core design of a game or make important tweaks to improve player experience as well as to analyse other objects for unintended behaviour.



ELLIOTT PHILLIPS

Games Technology (BSc)

I have always been fond of realism in games making them more historically accurate often felt like I was inside the history of the world instead of the game. Also, I would like to see a massive change in the conventional tutorial systems which often just take the players hand and gives them right step by step guidance removing the concept of the player learning for themselves.

GitHub: /Elliottphillips443/Dissertation-Project

LOW LEVEL AI BATTLE TACTICS.

The project's goal was to create an AI that would either increase realism in an RTS game or create a tool that helps people learn the games. That it has been placed in by having units refuse to do orders that would be unacceptable in real life such as an order that would lead them to their death without a change of survival.

CONNOR RHONE

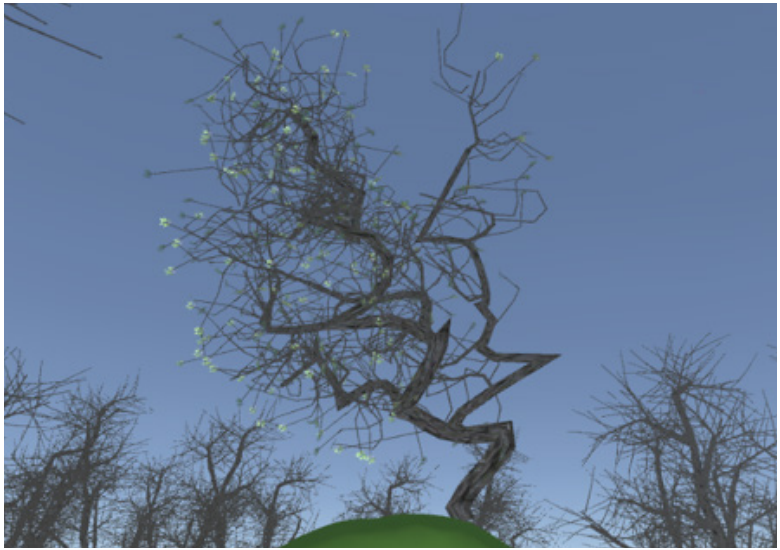
Games Technology (BSc)

I have been largely interested in procedural generation since first taking up programming. Several of my other pieces during this third year of university have included elements of procedurally created content, such as level layouts or plants. This project was an opportunity to take that up a notch, whilst also learning about the elements involved in the streaming of large geometries. I have also gained a solid foundation of knowledge on working with DirectX, and manually setting up object meshes by creating the buffers.

GitHub: /Synert/Dissertation

PROCEDURAL SOLAR SYSTEM GENERATION.

The completed project procedurally generates a simplified representation of a solar system. Planets are placed around a star, and simulate surface temperature based on the star's size, temperature, and distance. Each planet can be viewed up close in detail by using dynamic level-of-detail (LOD) meshes. The star and the individual planets can have parameters tweaked by the user in the GUI.



ELEANOR RICHARDS

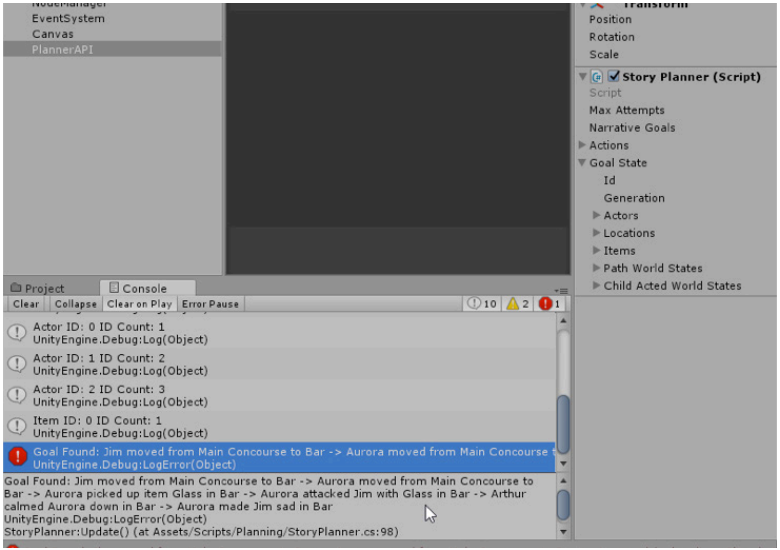
Games Technology (BSc)

I am a game developer based at UWE Bristol, I have always been interested not just in the game play but in the surrounding environments and how they are utilised to aid gameplay. For me, a good game is reflected in its environment and the mood it sets, I chose to use Unity as there are areas I have not yet explored, and as it is the platform most suited for rapid prototyping of large scale projects.

GitHub: /eleanorichards/CTP_Trees

DYNAMIC TREE GENERATION USING ENVIRONMENTAL INPUTS.

This project focuses on dynamically creating and placing trees, solely using information on the environment they are in. It is possible to view a single example with any eco-factors in a solo tree editor, or import a section of your own map and assign any environmental features including wind speed, light levels, precipitation and more in order to generate a fully populated section of terrain.



SAM RICHARDS

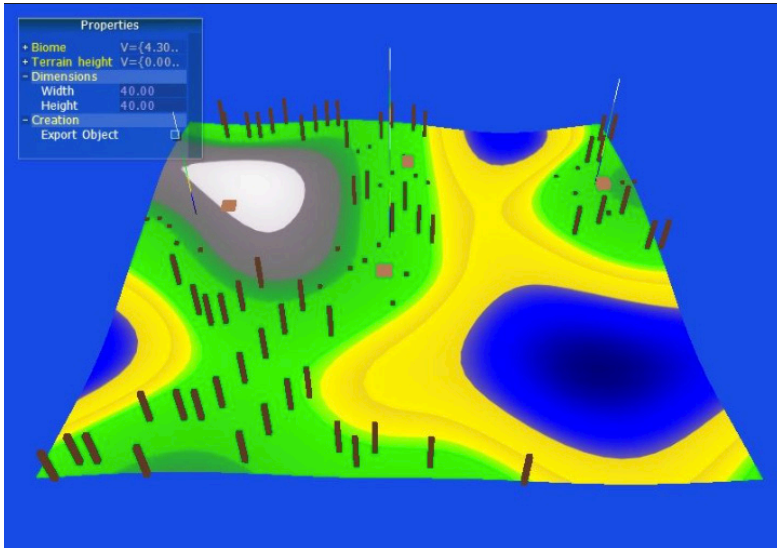
Games Technology (BSc)

I have a strong interest in the narrative design space available through the medium of games, in building worlds that are believable and that can adapt to the actions of the player or other actors. Through this project I have endeavoured to develop a system for narrative design that revolves around a realistic, adaptive world model the likes of which are regularly modelled within games but rarely with a weighted, narrative focus.

BitBucket: **/Mythalore/narrativeplanner/src**

A NODE-BASED TOOL FOR EXPLORING POSSIBILITIES IN NARRATIVE THROUGH VISUAL PLOT GENERATION.

This tool for exploring possibilities in narrative through visual plot generation allows a user to provide a narrative universe in the form of locations, actors and items and then list goals for each character. The system takes the initial world state and using contextual actions forms a plan to get the character to achieve their goals. This is conducted using a breadth-first search (A. Bundy & L. Wallen, 1984) and output as text to the user.



DANIEL ROWLAND

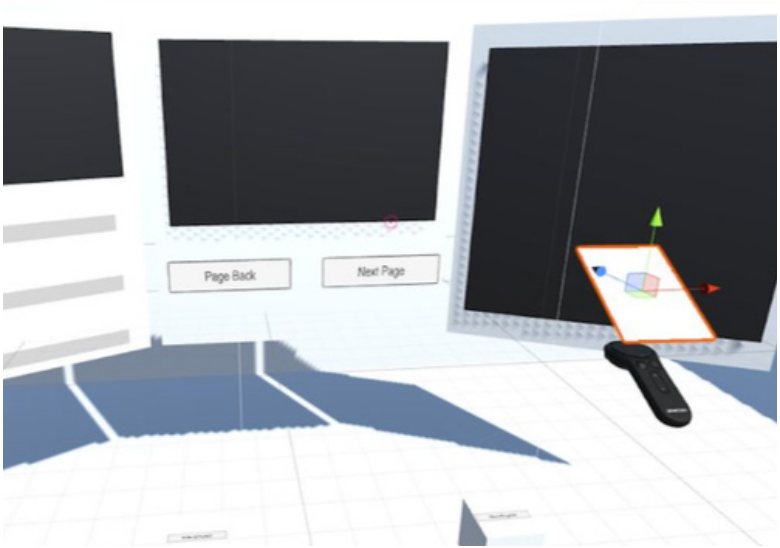
Games Technology (BSc)

As a person with a strong passion for the map design and creation of detailed worlds in video games, I wanted to have a project which would at least incorporate this while also including aspects about game design which I would need knowledge and practise on in the industry. The decision to create a dissertation which involved multiple aspects of technical implementation would give me the experience I desire. With this varied experience I hope this would give me an technical edge while also keeping the project to my interests.

GitHub: /StankyDan/CTPproject

PROCEDURALLY GENERATED ENVIRONMENTS ALTERED BY MULTI AGENT SYSTEMS.

This project includes multiple functions and properties all for a single function, to be a tool to create completely random and detailed lived in worlds. These worlds created by multiple agents who alter the world over time by doing simple tasks related to what people would do to survive. These map altering behaviours vary from destroying trees for wood to building their homes, leaving stumps and raising buildings, to naturally creating paths from common routes that they take.



BEN RYAN

Games Technology (BSc)

Virtual reality is the latest trend in the games industry that I would really enjoy experiencing and progressing my development through the industry, as a user interface designer. I feel this project will help point my career in the right direction in the skills and knowledge that would be needed for me to develop in this area further.

GitHub: /benryan96/Generalisation-of-VRUI-15015673

DESIGN FOR AN ERGONOMIC MOBILE USER INTERFACE PARADIGM FOR VIRTUAL REALITY.

I have created a baseline criterion for the creation of an ergonomically designed Virtual Reality User Interface. I have then analysed and contrasted the pre-existing user interface and their applications and inspirations to the possible criterion of the paradigm, which is the Virtual Reality User Interface.

CHARLIE SAUNDERS

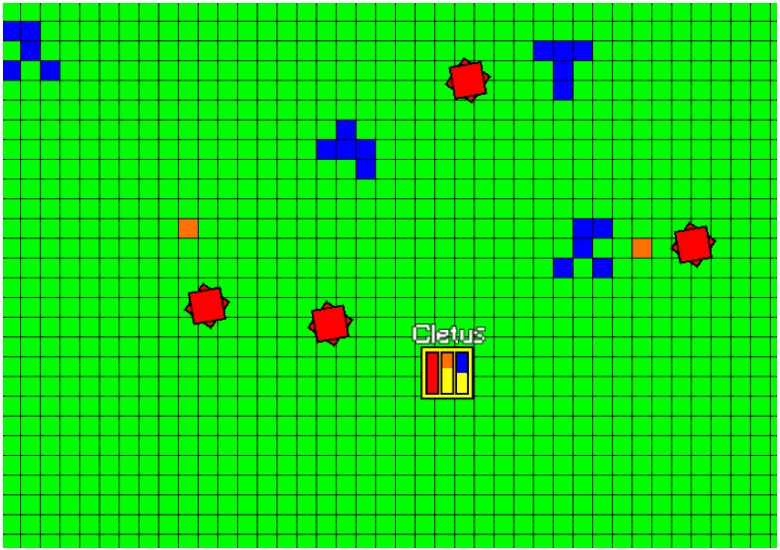
Games Technology (BSc)

Charlie Saunders was born in 1995 and lives in Bristol, United Kingdom. He is currently studying Games Technology BSc at the University of the West of England. Charlie's main interests include artificial intelligence, level design and player psychology. Charlie enjoys the challenge of C++ programming and wishes to improve his skills but also broaden his experience with different systems. With the Unreal Engine's success in recent years it appears self-evident that the Unreal framework is only going to become more common in industry and learning to use this system could prove invaluable in his future career.

GitHub: /xCharlesxx/CTP

CREATING COOPERATIVE ARTIFICIAL INTELLIGENCE WITH BEHAVIOUR TREES IN UNREAL ENGINE 4 USING C++.

An investigation into the creation of a cooperative artificial intelligence using behaviour trees in a 3D Unreal Engine scene. This project provides a framework for C++ developers to create their own custom behaviour trees using states as an intermediary between decisions and blueprint systems. Custom path-finding has also been developed to work in parallel with these systems, offering many advantages over the traditional Unreal path-finding such as obstacle avoidance and dynamic jumping. These systems operate entirely through C++ offering a lower computational cost compared to blueprint implementations.



ELLIOT SMITH

Games Technology (BSc)

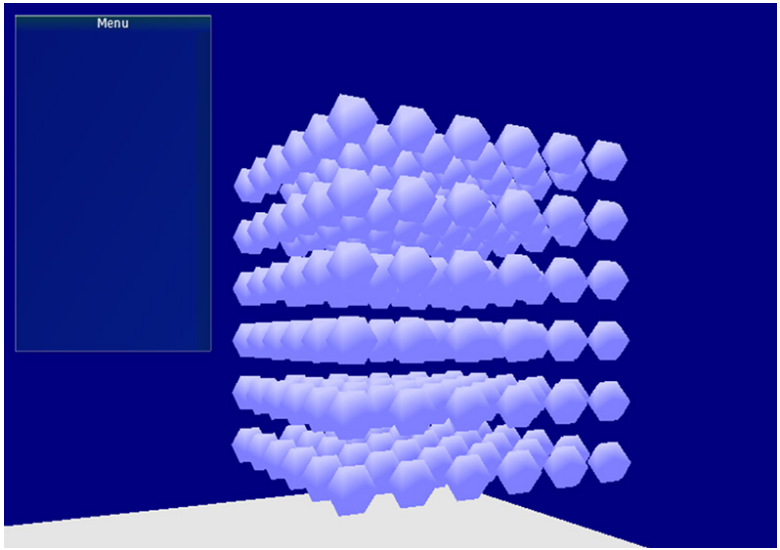
The primary objective of this project was to take a more scientific and technical approach to games programming; this was pursued as an attempt to delve into previously unknown styles of implementation.

Having never worked with virtual machines previously, this project provided extensive learning opportunities in relation to numerous areas of interest including: C++ programming, artificial intelligence and gameplay programming. The knowledge gained should help in the pursuit of a career in relation to gameplay programming.

GitHub: /elliottsmith1/CTP-Full

CAN A ROBUST AND FLEXIBLE INTELLIGENCE BE CREATED BY SIMULTANEOUSLY RUNNING MULTIPLE VIRTUAL FINITE STATE MACHINES?

This report outlines the effectiveness of using multiple virtual finite state machines to simulate intelligent behaviour in a survival environment. The project is built with core research into the Actor Model and Subsumption Architecture, simulating complex behaviour in an artificial environment by combining multiple actors, each of which has control over a simple behaviour.



NICHOLAS SMITH

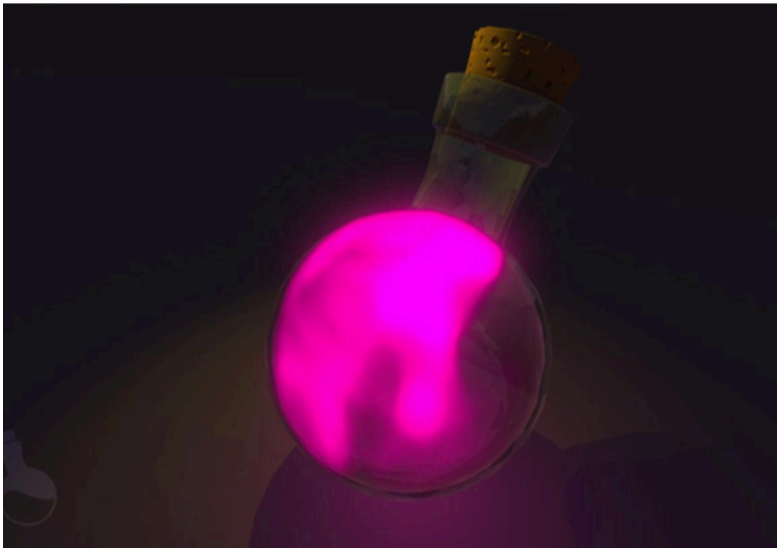
Games Technology (BSc)

Throughout my academic career I have always gravitated towards the visual aspect of video games. When designing a game concept the first thing considered was always the visuals. With this project I hope to illustrate to employers my willingness to research and improve myself.

GitHub: /Shesawrus/DissertationFinal

A PARTICLE SIMULATION OF THE TRANSITION OF ICE TO WATER.

The intention of this project was to create a system that simulated the transition between ice and water, and vice versa. Out of the several approaches researched, the Smoothed Particle Hydrodynamics (SPH) approach was selected and attempted. The particles are designed to dissipate heat and change state; water and ice.



TOM TURNER

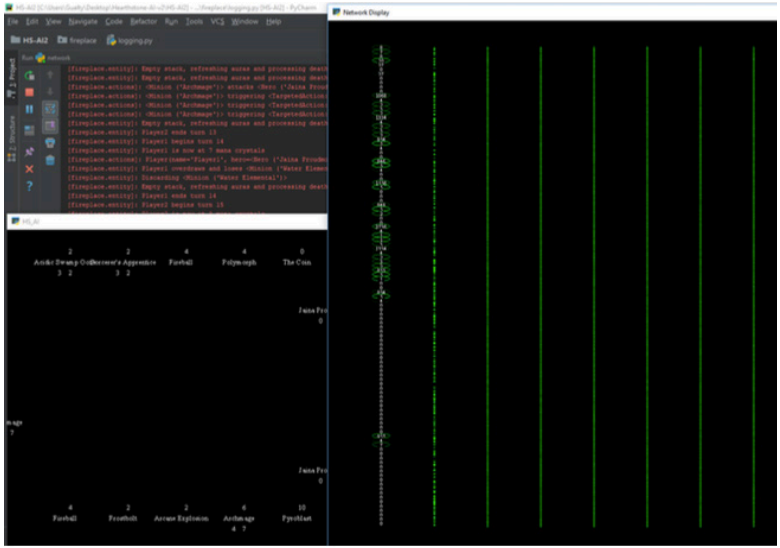
Games Technology (BSc)

Throughout my academic and commercial career, graphical fidelity has often been a focus for me, and is evident in the majority of the work I produce. My interest in this project was to learn advanced rendering techniques and simulations to help further me towards my goal of becoming a technical artist/graphics programmer.

GitHub: /TomTurner2/CTP-Fluid_Simulated_Volumetric_Explosions

FLUID SIMULATED VOLUMETRIC EFFECTS (F.S.V.E).

FSVE is a modular framework for producing fluid simulated effects. A key aspect of this study was to analyse how viable fluid simulation is, in a game environment. Ease of use was found to be the limiting factor, with prior performance concerns addressed with the development of instancing and streaming techniques. The project also explored the development of a new rendering method for a particle suspended explosion. Although successful, the simulation itself was not viable for use in a game development pipeline.



GUALTIERO VERCELLOTTI

Games Technology (BSc)

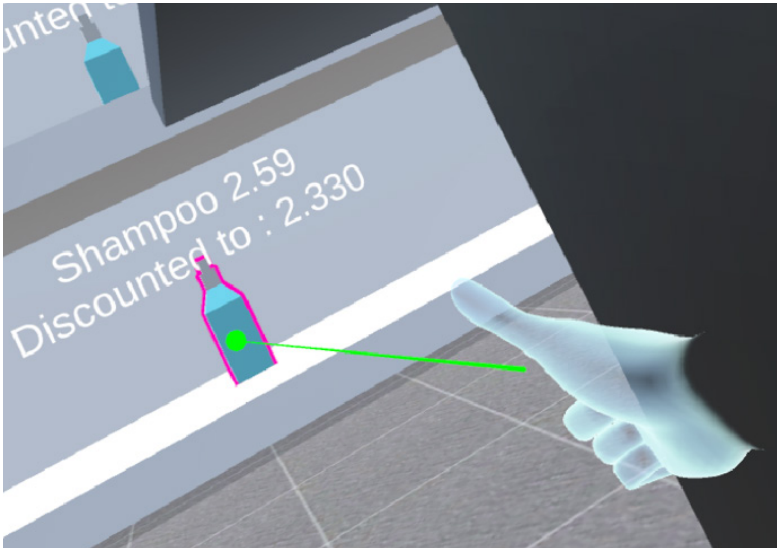
Gualtiero Vercellotti is a Games Technology student passionate in AI (Artificial Intelligence) and Machine Learning and always interested in complicated problems, in the past, he created simple neural networks to play modified versions of TicTacToe both in C and Java.

GitHub: /gualtyphone/Hearthstone-AI

GitHub: /gualtyphone/Hearthstone-AI-v2

ARTIFICIAL INTELLIGENCE ASSISTANT FOR COLLECTIBLE CARD GAMES.

The goal of this project is to create a system that allows players to improve themselves in playing a game, by giving suggestions on what moves to take, or by telling the players the probabilities of a certain action resulting in a better outcome. In order to accomplish this task the system needs to understand the game and be able to predict the best moves. While the final system created does not directly give players any information, it could be possible to use it to learn a specific matchup and a strategy for that matchup.



NIALL WEBB

Games Technology (BSc)

Although my background and skills are more focussed on game and level design, Virtual Reality is a technology in its infancy therefore it felt valuable to use this project to learn about using the technology and its future potential as well as add it to my list of skills. It will benefit me in the future as more studios big and small look at the platform for making games.

GitHub: /n8-webb/ShopVR

PROTOTYPE VR SHOPPING APPLICATION DEVELOPED FOR ELDERLY AND DISABLED ACCESSIBILITY.

This project uses Virtual Reality as a tool to create a unique online shopping experience focused on accessibility, by providing solutions to outlined problems like disability and aging that is solved by the technology and not as easy in the real world. Additionally it tests the viability of Virtual Reality as tool for this and similar projects going forward and whether there are substantial benefits.

CURTIS WISEMAN

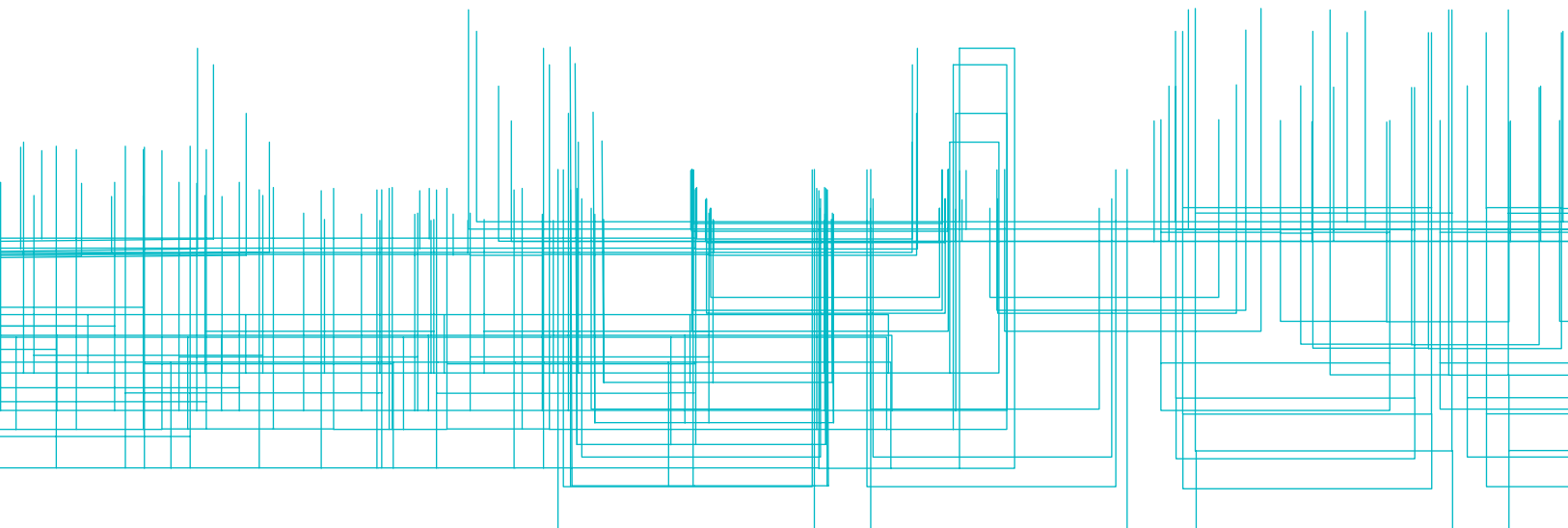
Games Technology (BSc)

Since a young age I have always appreciated the visual aspect of games and films, often being just as inquisitive about the technical achievements in this regard as the artistic ones. I intend to pursue technical art for 3D animated media in my own career and being able to offer a tool that provides a layer of mutual communication between the creative artist and the technical programmer would represent my strengths as a bridge between specialists.

GitHub: /CurtisWiseman/CTP---Art-Style-Replication

AUTOMATED REPLICATION OF ART STYLES IN SHADERS THROUGH GENERATIVE ADVERSARIAL NETWORKS.

A combination of the deep convolutional network technology of a generative adversarial network with the linear optimisation capabilities of a genetic algorithm to manipulate pre-set shaders into approximating a given cartoon-like art style. The logical systems are written in Python 3.6 and the rendering is performed in Unity 2017.1.

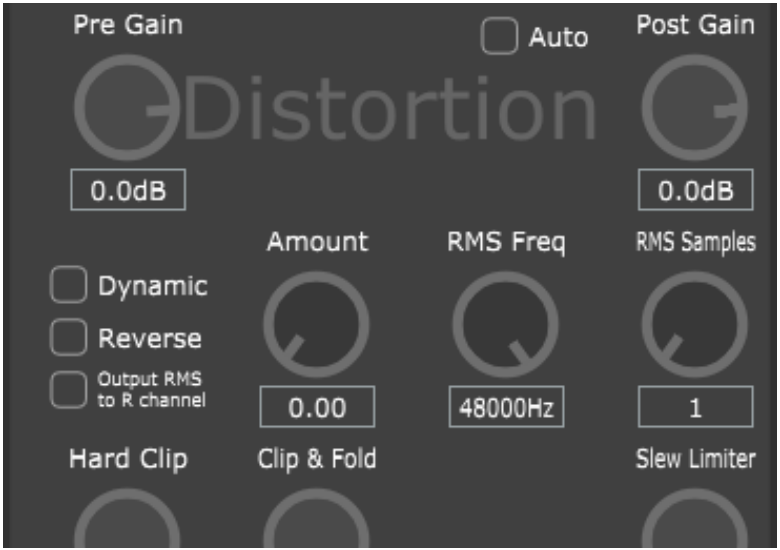


Music Technology

Today's audio and music industry whether studios, production companies, or tech firms look for practitioners who think outside the box but also know what goes on inside it.

Music as an art form evolves constantly, with practitioners taking inspiration from composers and artists past and present and developing future sounds.

Music, news, documentaries, drama and sport are streamed to our TVs computers and mobiles around the clock. Sound professionals are vital in the global delivery of these services.



MARCO ASTIN

Music Technology (BSc)

When creating prototypes of this project in the past, I became increasingly interested in experimenting with algorithm design and investigating different methods. After having a continued interest in plugin development, it was an easy decision to make this the subject of my dissertation. It was intended to expand my programming knowledge, digital signal processing techniques and bring me a step closer to realising my goal of owning a plugin company.

INVESTIGATION INTO DYNAMIC DISTORTION TECHNIQUES.

This project aims to explore and evaluate unconventional expansions to distorting with a static waveshaper. Several algorithms for creating various distortion and saturation effects are analysed. Dynamics processing is then explored, and these topics are then linked into the creation of an adaptive waveshaping system which reacts dynamically to input signal amplitude over time.

KIAN BAHRAMI

Music Technology (BSc)

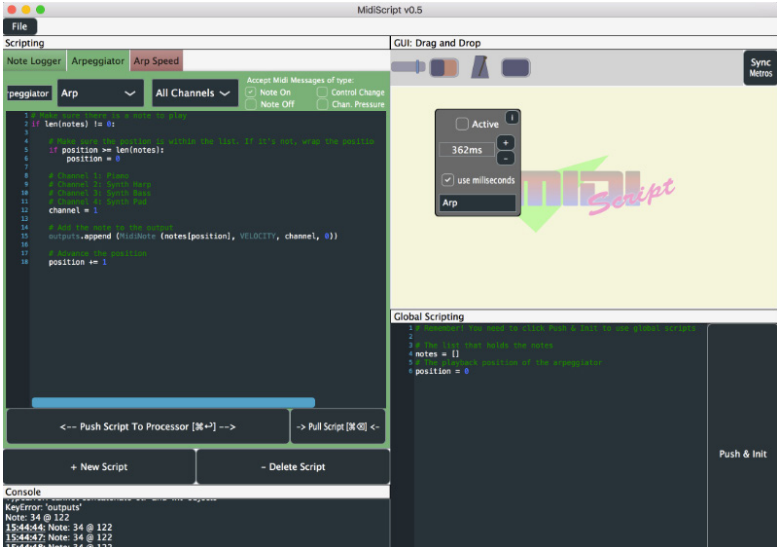
I knew I wanted to learn and do something new in my final year. Before the final year project, I knew almost nothing about VR or spatial audio. Now, from the skills and knowledge I've gain about the technology and industry, I want to pursue a career in immersive experiences and be a part of something new and exciting. This project, and year in general, has really changed everything for me!

Website: **www.kianbahrami.co.uk**

VR AND LIVE MUSIC.

VR is an emerging technology which provides users with unique and immersive experiences, but has ultimately failed to live up to its expectations. Live music has seen a boom in recent years with people wanting to gain experiences over physical products.

The project set out to determine if VR has potential within the live music industry and what improvements to the technology/ experience would be necessary to entice more users.



ADAM BETHELL

Music Technology (BSc) - 15016643

I am an audio software developer and musician so naturally believe programming is a wonderful tool for musical expression. This project allowed me to explore how others approach coding and develop a strong appreciation for interaction design. The development of a larger scale application pushed me to learn and has left me better equipped for my next project.

Website: **https://adambethell.io**

MIDISCRIPT: EXPLORING LEARNABILITY IN TEXT - ORIENTED MUSIC PROGRAMMING.

Textual programming for music can be difficult for novices to learn. Through the creation of a music programming environment (MidiScript) strategies for increasing their learnability were implemented and tested. Background research drove MidiScript's initial development with participatory design informing its adaptation, and refinement.

A user study was conducted that suggests visual objects that replicate textual functionality can help novice users learn MidiScript's textual elements more quickly.

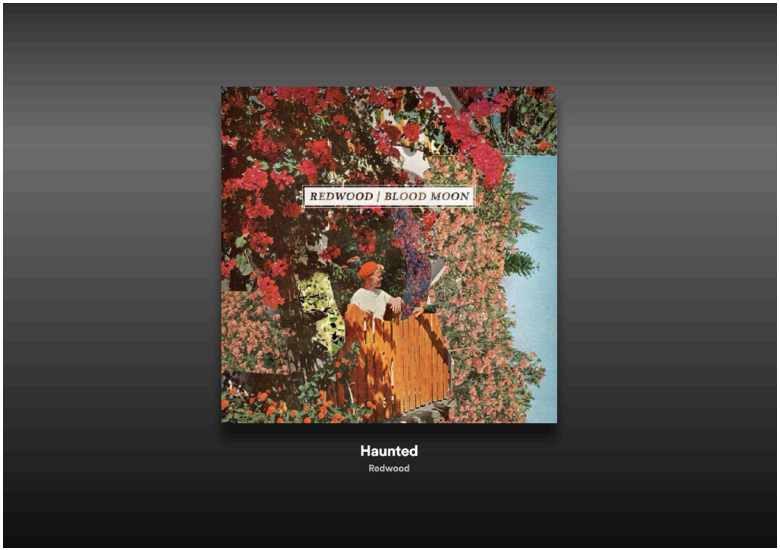
JOSH BIRCH

Music Technology (BSc)

My name is Josh Birch and I am a driven individual with a passion for music and developing new platforms for creative expression. As a drummer myself, this project was inspired by my extensive experience in performing live shows. With some further development, this project will be used in my future live performances, where such an instrument would be musically appropriate.

THE AUGMENTED ELECTRONIC DRUM KIT.

The Augmented Electronic Drum Kit is a software based instrument extension built around the framework of an Alesis DM10 electric drum kit. The extension is designed to be used as a creative tool in live performance situations. It provides drummers with the ability to turn on and off various audio processing effects and control their parameters, as well as acting as a dynamic drum sampler. The software extension is built in Max/MSP and uses the MIDI messages received from the Alesis to control the drum sampler and the effects.



ALEXANDER BIRCHALL

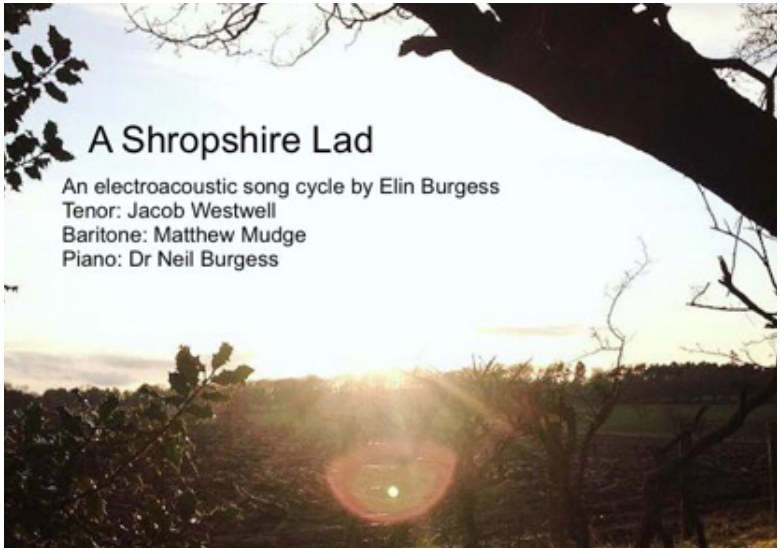
Music Technology (BSc) - 14009772

I have been composing music with my project “Redwood” for the last four years. Since its conception, we have toured all over the UK and Europe multiple times and released our music on Vinyl. My thesis sought to explore many issues I was faced with throughout my musical career. Playing in a range of venues and environments challenged my song writing to be able to still create songs that sounded the best they could in every environment.

Spotify: /artist/4xJH59S17JCIMbzP7VnBso?si=m6krN_srT3CevbOYW_UqKA

CAN YOU COMPOSE A PIECE OF MUSIC FOR A SPECIFIC ENVIRONMENT?

This project revolves around the study of composing music for specific environments and the relationship between the evolution of technology with live music. Multiple projects were composed and recorded with the idea of exploiting certain environments for artistic potential. Furthering this, the notion of creating recordings that employ techniques throughout time with the use of off stage performance. Thus creating more sonically immersive pieces.



ELIN BURGESS

Music Technology (BSc)

Elin Burgess is currently in her final year studying Creative Music Technology BSc. She is a cellist and a pianist with experience in several areas of music technology, including visual programming, audio post production, sound design and recording technology. Additionally, she has a strong foundation in live sound engineering and has been a professional live sound engineer for the last three years.

SoundCloud: /elin-burgess/sets/a-shropshire-lad

AN ELECTROACOUSTIC SETTING OF SELECT POEMS FROM HOUSMAN'S "A SHROPSHIRE LAD".

The aim of this project was to compose and record an electroacoustic setting of A. E. Housman's A Shropshire Lad. The reason this project was chosen was to show the continued relevance of A. E. Housman's work. After researching song cycle composition techniques from various Western European traditions and techniques used in generative composition, six art songs and three generative interludes were composed, recorded and mastered.

JACK BZOWSKI

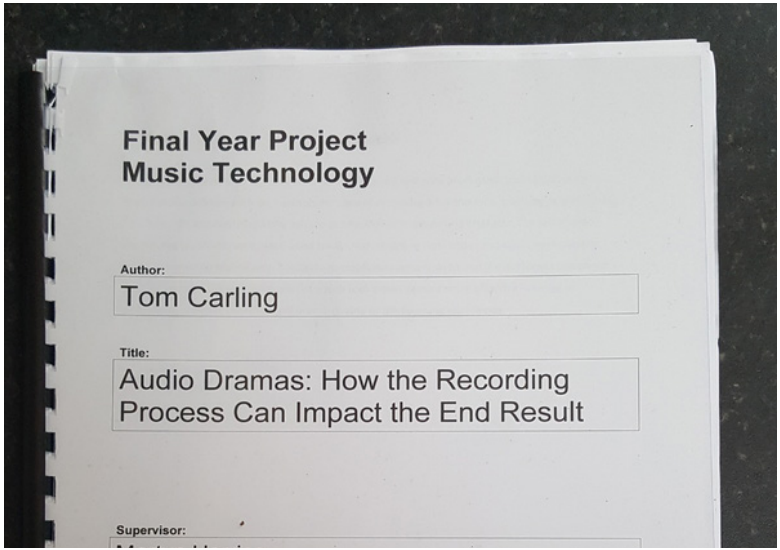
Music Technology (BSc)

This project was an exploration of all of my musical ambitions. I learnt more about recording, mixing and mastering creating this project than during any other period or creative effort. It was a great opportunity to be able to create a cohesive artwork with as much ambition as I wanted. In particular I am glad that composing lush four part vocal harmonies is now something I am confident in doing.

LinkedIn: /JackBzowski

PEOPLE FONDNESS: THE RECORDING TECHNIQUES OF BRIAN WILSON AND PHIL SPECTOR.

This project was a composition and recording project exploring the compositional and recording techniques of The Beach Boys and Phil Spector, and the overall ideology that changed record making from simply capturing a performance to creating a unique synthetic space. The final result was an album of original material, filled with unique instrumentation, unusual song structures, and numerous lush vocal harmonies.



TOM CARLING

Music Technology (BSc)

I have always had a keen interest in post-production for media. Being influenced by games, films and radio from an early age aided this career choice and furthered my interests. This project has served as an ideal platform for me to explore these interests while also improving my researching and report-writing skills. The produced artefacts will add to my 'show-reel' and help demonstrate both my passion and ability to work in this field.

LinkedIn: /tom-carling-056553162/

AUDIO DRAMAS: HOW THE RECORDING PROCESS CAN IMPACT THE END RESULT.

Research was conducted to study an array of recording and post-production techniques incorporated in the production of audio dramas. The techniques researched were then put to the test by creating a pair of artefacts; 2 radio dramas with the same script and actors were produced, one using a vintage BBC radio microphone, and one making use of binaural sound. A conclusion was drawn to determine which method reigned supreme in terms of practicality, creative potential and overall quality of the listening experience.

HENRY DEWAR

Music Technology (BSc)

During my placement with the LSO, I picked up a keen interested in live streaming and how it can engage with people outside of the concert hall. From this experience, I took a wide range of knowledge on not just music technology but also on filming and video editing; this helped shape and direct my final year project. Since then, I have been able to get work experience at Television Centre in London and achieve my aims of working in broadcast audio.

YouTube: watch?v=dxW_DvSuJo8&t=0s

LinkedIn: /henry-dewar-b49b26b5

WHY ARE ARTISTS LIVE STREAMING AND WHAT AFFECT DOES THIS HAVE ON LIVE CONCERTS?

This project sets out to observe why artists are live streaming musical content and what affect this is having on the concerts that are being streamed. Research and data was collected to compare other streaming markets, like gaming and entertainment, with music live streaming. Using resources from UWE Bower Ashton and NBlock Studios, a simple three camera setup was used to stream three artists live from The Students' Union at UWE Bristol to YouTube. Data and analytics were taken and used to observe the nature of how a live streamed event is received.

CAMERON FARWELL

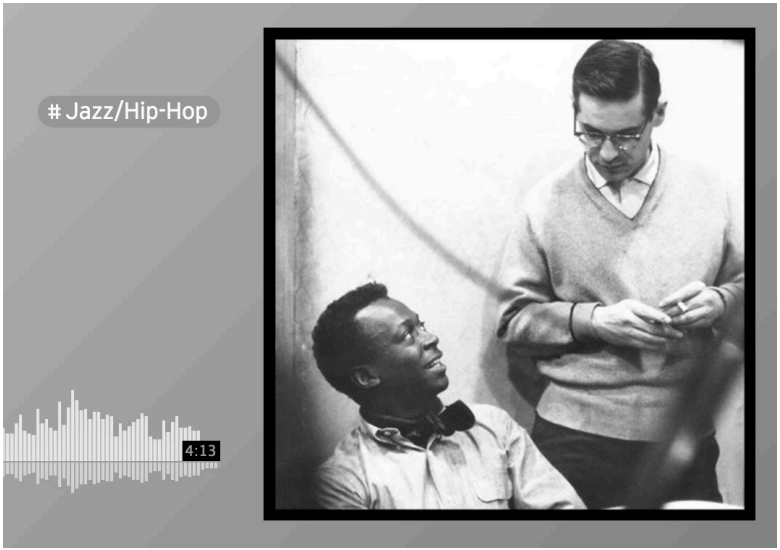
Music Technology (BSc)

This project helps to develop both my interest and knowledge in two creative areas, music technology and graphic design. The advancement in my skills beyond the course's content further progresses my ambitions in pursuing the line of work that was introduced to me while on my placement year. My thorough enjoyment of working on the project has encouraged me that pursuing a career in this area is the right decision.

LinkedIn: /cameronfarwell

AUDIO APP UI/UX DESIGN FOR IOS DEVICES.

The purpose of this endeavour was to investigate and improve upon user interface (UI) and user experience (UX) of audio apps on iOS devices. Three phases were completed en route to achieving this aim. In brief, research investigated UI, UX, iOS and users, analysis was applied to evaluate a range of audio apps, and a redesign stage took one of these apps (AmpliTube) and improved the UI/UX based on the previous findings.



MILES FORD

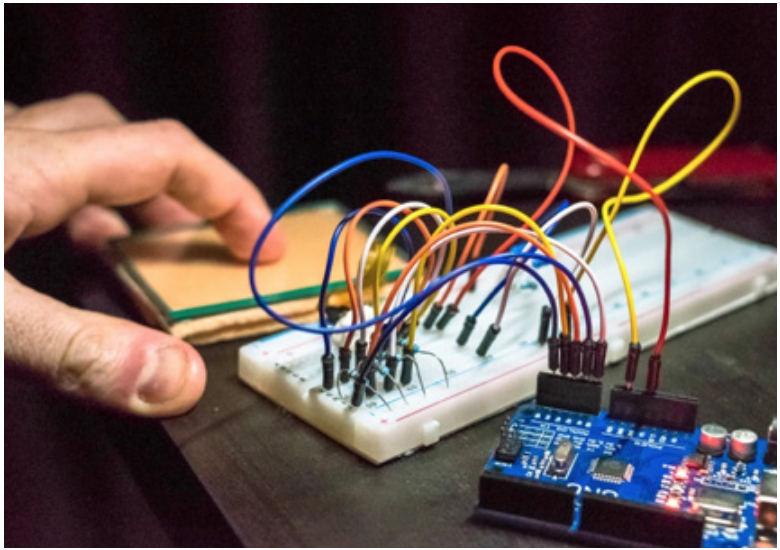
Music Technology (BSc)

Miles is a hip-hop MC and producer who goes by the alias “Halloomi”, and co-manages the independent, charitable record label - Rooted Records. His first EP “Technicolour” was released last December, and his next offering “Overtime” is set to be released later this year. His passions lie in the border between jazz and hip-hop, this report has helped him to form a deeper understanding of these genres in combination.

SoundCloud: /halloomibeats/sets/spirit-tracks

A CRITICAL EVALUATION OF JAZZ AND ITS INFLUENCE ON HIP-HOP.

This report explored the existing relationship between jazz and hip-hop. Research was carried out on specific artists, including Bill Evans, Miles Davis, Madlib, and Q Tip, to form a deeper understanding of compositional techniques used to create jazz and hip-hop. These techniques were then utilised by the author, to compose a five track EP including an original jazz composition, and four hip-hop tracks, formed from samples of the jazz piece.



ED FRY

Music Technology (BSc)

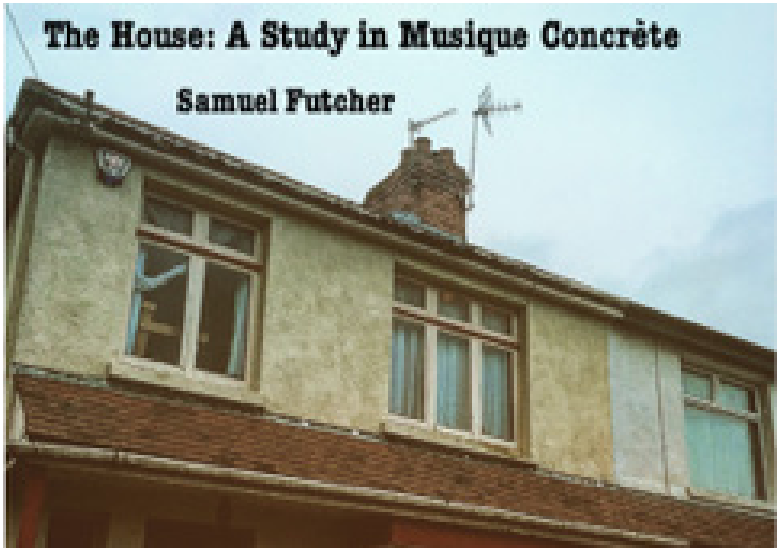
As a musician and engineer, expressive music technology hardware is important for me in both creating and working with music. By understanding the developmental concepts and hardware this has allowed me to build and test music technology hardware using unorthodox methods borrowed from alternative disciplines, and the latest technology, to be suited for a career in design and construction of music technology products in the 21st century.

Website: **https://www.edfry-audio.co.uk/dissertation**

LinkedIn: **/edfryaudioengineer**

AUDIO APP UI/UX DESIGN FOR IOS DEVICES.

As music technology has progressed over the last two decades, workflow has increasingly moved 'in-the-box', with many digital audio workstations leading the way for music-making. This project aimed to develop an expressive controller, utilising sensor technology and Arduino, based on the theories behind Human-Computer Interaction, interaction design and their applicability to music technology, for example within the MPE specification, and use these to develop and analyse testing of expressiveness.



SAMUEL FUTCHER

Music Technology (BSc)

I am a Creative Music Technology graduate with an interest in creating music using any means possible. This could be through the use of musical instruments, miscellaneous objects or a combination of the two. I have completed a number of studies as well as the final works for this project. My dissertation helped me to understand the origins of Musique Concrète and how to use objects in music, presenting me with the option to do so in further projects.

SoundCloud: /sam-futcher

LinkedIn: /sam-futcher-3229a712b

THE HOUSE: A STUDY IN MUSIQUE CONCRÈTE.

The purpose of this project was to explore whether it is possible to convey individual rooms of a house in a piece of music, using objects from each of the rooms. This involved research into Musique Concrète, how it began, developed and analysis of previous works. Coherence was a vital component of this project and the music produced which is demonstrated by the different choices made in each piece.

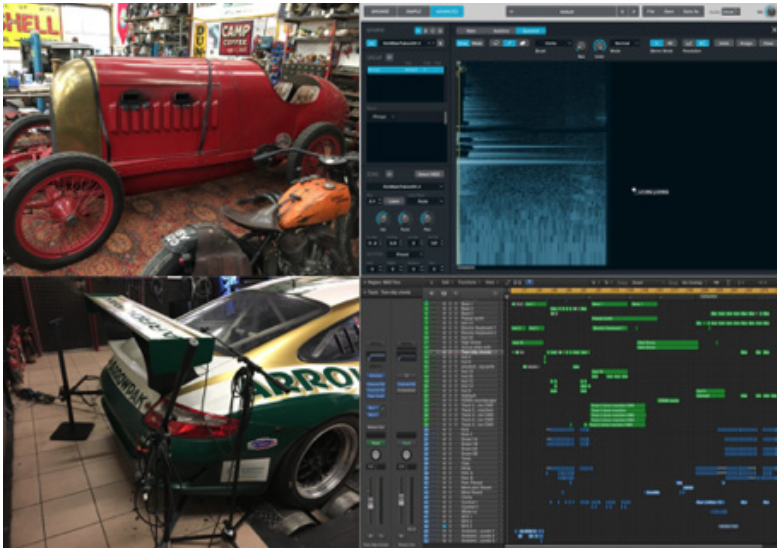
MARCO HALL

Music Technology (BSc)

As a keen music producer, it was interesting to design and build a product which can be a part of the studio set up. Also, a recent thirst for knowledge of electronics drove me to choose a project which could develop these skills, as I would love to work in electronics. Hopefully by doing this project, I can develop these skills further and create more sophisticated products in the future.

DESIGNING AN ERGONOMIC MIDI CONTROLLER.

Ergonomics is the science behind improving the interaction between products and their users. There are many ergonomic ideas ranging in size from computer keyboards to entire office layouts. It was noticed that there are very few ergonomically driven products within music technology, so the idea was to build an ergonomic MIDI controller, and understand why it may not be as prevalent as in other industries.



ALEX HARLEY

Music Technology (BSc)

Throughout my life I have always had a love for cars and music. Through this project I aimed to combine the two, allowing me to further my creative skills in audio manipulation and composition with very limiting material, whilst also having the opportunity to meet new people in the automotive world, and work with new, old and rare automobiles that usually would be off limits to the general public.

SoundCloud: /alex-harley-6/automobile

COMPOSITION SOLELY USING AUTOMOTIVE SOUNDS.

This project looks into whether you can successfully produce a musical album using sounds only produced by automobiles. This includes exhaust tones and percussive sounds like doors, bolts, handbrakes etc. from cars and bikes throughout automotive history. The project will cover the history, philosophy and process of electronic music, and reflects on creative studies based on some past electronic music genres.

JOSEPH HORTON

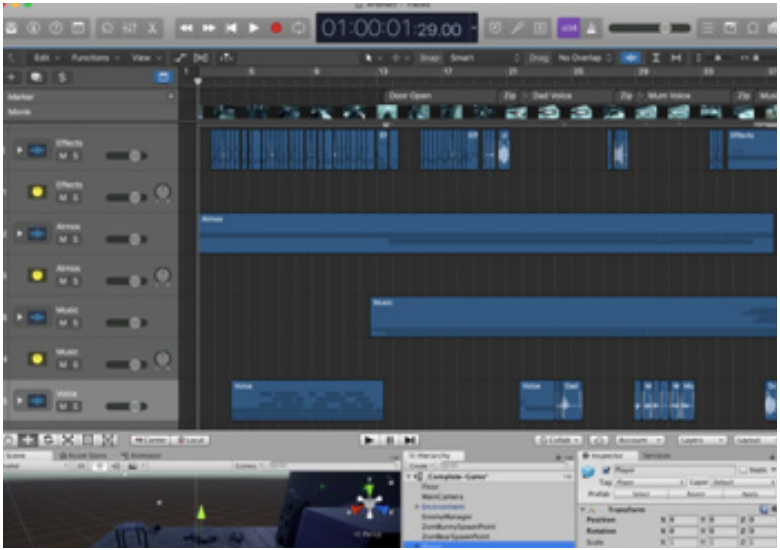
Music Technology (BSc)

Joseph is a technologist and developer. This project has allowed him to progress his understanding of electronics and how technology can be used to enhance experiences. He recently put these new skills into practice and developed an immersive musical dining experience which has been shown at leading arts festivals Lost Weekend and Mayfest.

Website: **www.jhorton.co.uk**

ENHANCING LIVE MUSIC EXPERIENCES FOR THE DEAF AND HARD OF HEARING.

This project explored how tactile sound can be used to enhance music experiences for non-hearing people. The resulting technology was a wireless, low-latency tactile transducer which allows the user to feel the music as vibrations. A user study was conducted to test how different audio processes can be used to augment audio sources to make them easier to interpret as music.



HARRY JORDAN

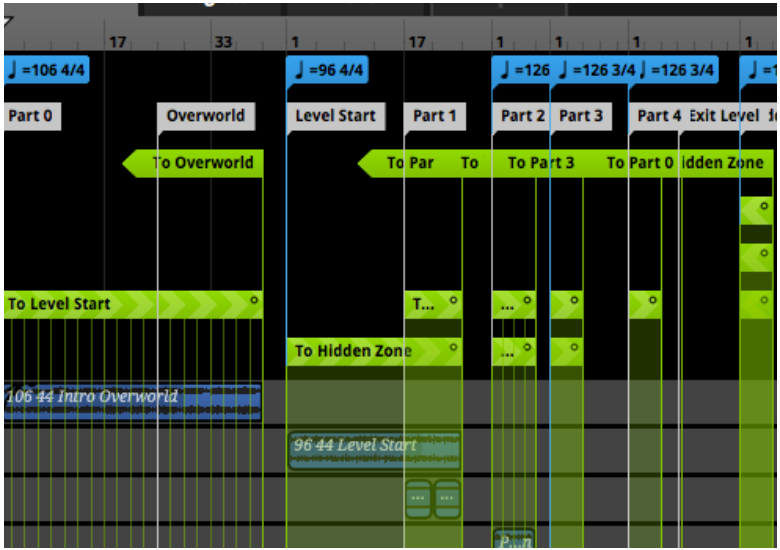
Music Technology (BSc)

Growing up, I was always interested in video games and music. Combining the two in my degree helped me decide that after university I would like to incorporate both into a career. By doing this as a final project, and choosing relevant modules within my course, I hoped to gain insight into how audio works and is used in games so that I can enter the industry with a solid background.

LinkedIn: /harry-jordan-4a79a9162

AN EVALUATION OF AUDIO IN SUB-GENRES OF HORROR GAMES.

The project is an in-depth look into the differences between sub-genres of horror video games with various forms of genre classification, how audio is used in these games to scare a player and set an atmosphere, and how audio can be manipulated in a non-horror game to alter the perceived genre by using common horror audio conventions derived from a participant study and background research.



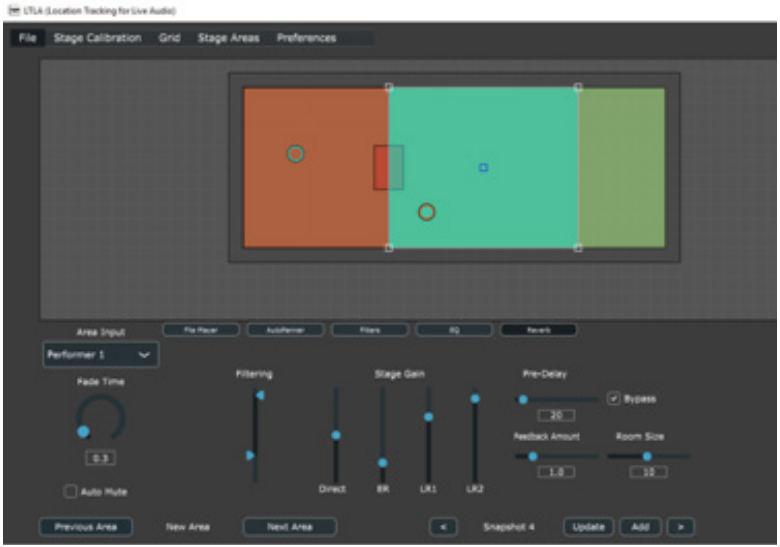
DAN KESBY

Music Technology (BSc)

This project relates to my professional skills by providing a platform to develop my compositional skills and technical abilities regarding digital audio softwares. Video game music has always been an interest of mine, and this project has provided a basis from which I plan to develop a portfolio of dynamic music systems (targeted to key games/genres of games) that could potentially lead to freelance work within the industry. Career wise however, I have been more focused with pursuing freelance live sound engineering and this is something I wish to prioritise and expand upon for the future.

AN INVESTIGATION INTO VIDEO-GAME MUSIC.

The aim of this project was to compose and produce dynamic music that was designed for a specific genre of video game. After an in-depth study of existing academic works relating to the subject, analysis of musical examples from selected video-games within the genre provided the basis for my own compositions. Fmod was then used to develop these compositions into a complex dynamic music system that could be implemented in a game.



JACOB MILLS

Music Technology (BSc)

Product and Software Development Engineer with a strong interest in the software development of audio related products such as consoles, plug-ins and other applications. The project concept was introduced whilst on an industrial placement year with DiGiCo. The project is highly software focussed and the skills learnt through the development process will be very beneficial going into full time employment.

GitHub: /JacobMills22/LTLA

LOCATION TRACKING FOR LIVE AUDIO.

The project utilises a straight forward image processing-based tracking system capable of identifying and tracking performers on a stage. This data is used to provide a live sound engineer with a location based cueing system beyond basic audio file triggering. The project allows an engineer to design separate zones that trigger changes such as reverberation, panning and filtering to a performer's microphone.

TOBY MISSELBROOK

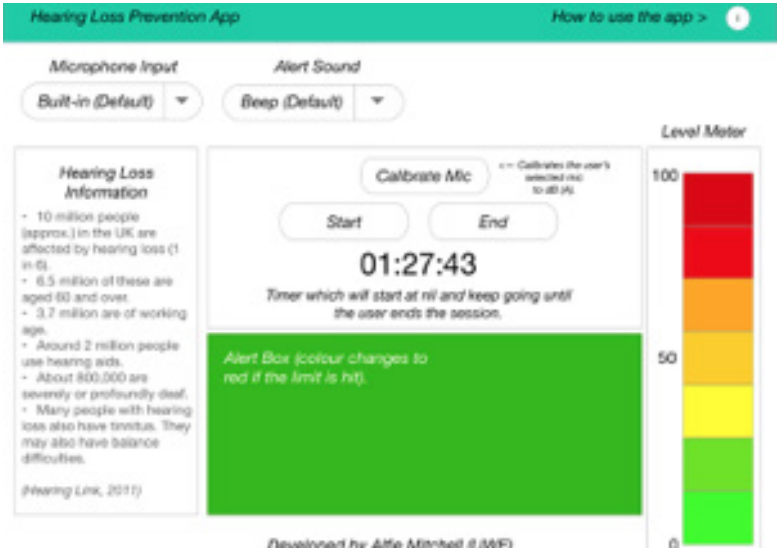
Music Technology (BSc)

I am a sound designer at heart. I love creating everything from immersive audio environments to intense, snappy one-shots. I also love video games. Naturally, I would create a project that would combine these two ideas. This project helped me link these together and also sent me looking more in-depth into game audio concepts, which has helped shape the way I will approach video-game audio in the future.

Website: **www.misselbrookaudio.com**

OBSERVING THE EFFECTS OF GAME AUDIO ON PLAYER PERFORMANCE.

This project looks to see if a change in in-game audio can yield improvements in player performance in a competitive first-person shooter game. The audio is designed to not give the player any technical advantage or extra information (such as louder enemy footsteps could). The project also looks into modern methods of gun sound design and core game audio concepts. The results showed promise, but ultimately no conclusion could be drawn.



ALFIE MITCHELL

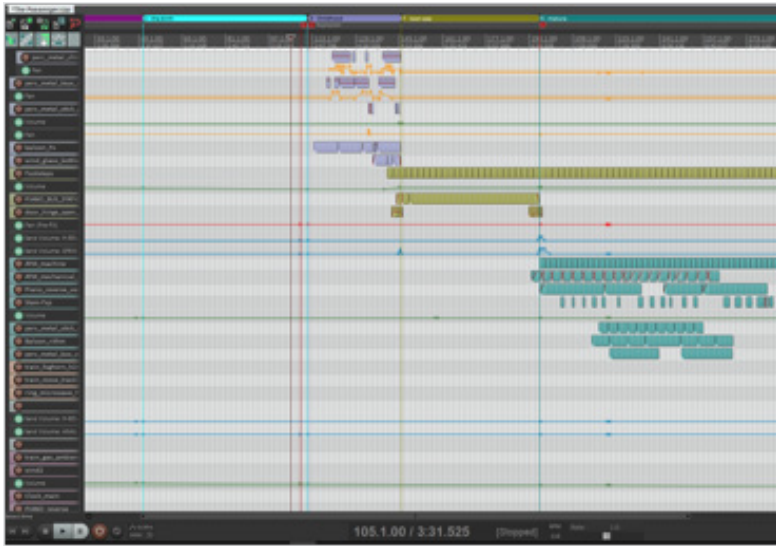
Music Technology (BSc)

My name is Alfie and I have been studying music for over seven years. I am particularly interested in studio recording and post production, but I enjoy the wider scale of music technology. Web development is a recent interest of mine, so this project was a good eye-opener into this field. I am ready to explore many fields of work within my professional audio career.

LinkedIn: /alfie-mitchell-audio

DEVELOPING AN APPLICATION TO HELP REDUCE THE RISK OF HEARING LOSS IN MUSIC STUDIOS.

Hearing loss is an important issue within the music industry. This project aims to tackle the issue, and software was developed from the research that was undertaken. The first half of the project goes in depth about noise-induced hearing loss, and the methods used to reduce the risks. The second half applies the methods researched into a user-friendly application built in HTML, CSS and JavaScript.



ISAAC ROMAN

Music Technology (BSc)

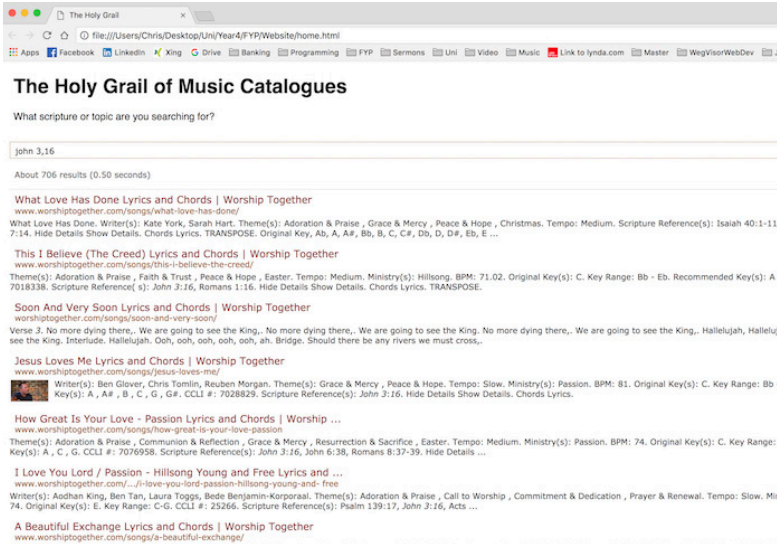
The main motivation for this purpose is due to a deep passion for music, understood as a broader concept than traditionally thought. During the making process, I developed skills in music, field recording and sound design. These skills were easily transferable to other modules such as post-production and audio for games. Besides, I was able to manage a final submission on time, tackling stress and solving problems successfully.

SoundCloud: /user-242582773/the-passenger

Website: https://spinakel.wixsite.com/irsound

FROM THE CONCRETE TO THE ABSTRACT (A STUDY OF MUSIQUE CONCRÈTE).

This project aims to create a composition of musique concrète for which a previous study of the musical period has been done without forgetting their subsequent influence in different artistic fields. Ten short studies were completed besides the final piece. This final composition represents the different stages of life. It was divided into seven parts which complement each other to make sense of a complete piece.



CHRISTOPH SCHICK

Music Technology (BSc)

On my placement year in Singapore I discovered that I enjoy software engineering very much. Hence I chose a coding based project. However, the project developed more into a research based project. While I still enjoyed working on the prototype, it doesn't have much relevance to my vocational future, as I will be working on car audio systems rather than websites.

THE HOLY GRAIL OF MUSIC CATALOGUES.

The purpose of this project was to enable artists to search an online music catalogue by using references to a piece of literature. In the course of this project research in the areas of UX/UI design, search engines and web development was undertaken.

SAM WALKER

Music Technology (BSc)

Travelling to America to shoot a Hip Hop documentary has been on my radar for a couple of years due to my adoration for Hip Hop. I then just decided to go ahead and do it, and so flew to Chicago and shot it in 6 days. The documentary is designed to be part of a series, and I endeavour to get this episode commissioned, in order to make a series exploring emerging music scenes from around the world.

Website: **www.mellif.co.uk**

FANTASTIC BEATS AND WHERE TO FIND THEM: CHICAGO.

Fantastic Beats and Where To Find Them: Chicago is a 30-minute documentary focussing on the current Hip Hop scene in Chicago, and how it's evolution since 2012 has led it to become an increasingly important part of Chicago culture. Although Fantastic Beats is primarily about Hip Hop in Chicago, it also explores themes of racism, segregation, and education. The report covers the production process of making a guerrilla-style documentary, complimented by my personal reflections throughout the process.


CREATIVE
TECHNOLOGIES