

EDUCATION

- **University Of Bristol** Bristol, UK
MEng Computer Science *Sept. 2020 – July. 2024*
 - **Predicted First Class Honours:**
- **Bishop Vaughan Sixth Form** Swansea, UK
A levels *Sept. 2018 – June. 2020*
 - **Maths(A*), Biology(A*) and Physics(A):**

EXPERIENCE

- **University of Bristol** Bristol, UK
Graduate Teacher(Level 2) *Sept. 2023 - May. 2024*
 - Providing targeted academic support to a group of 5 students in a second-year course. Cover approximately 30% of the main course content in the supplemental teaching sessions, such as how to utilise **Github** for code management.
- **University of Bristol** Bristol, UK
Software Development Team Member *Sept. 2021 - April. 2022*
 - Created a video connection system for Gromit sculptures across the city, as requested by the university.
 - Enhanced front-end UI by dynamically resizing and customizing content based on window size through **Javascript**.
 - Used **Github** to manage version control, track progress via a Kanban board, and resolve issues to improve code clarity.
- **JP Morgan Intern** London, UK
Markets Analyst *July. 2019 - August. 2019*
 - Secured one of 80 places at a 2-week internship in the Markets division. Completed project with a partner to present services to clients. Gained planning, analysis, and teamwork skills through this.

PROGRAMMING SKILLS

- **Languages:** Python, Java, C#, C, C++, GO, JavaScript, HTML, CSS
- **Technologies:** AWS, Git, MS Suite, Unity
- **Frameworks:** React.js, NumPy, PyTorch, Pandas

PROJECTS

- **VR-Games Project:**
 - Produced 'Marco Predatorio,' a mixed-reality game, integrating **two physical spaces** into one **VR** game environment, allowing interactions between game spaces, such as power-ups or attacks.
 - Implemented body tracking from **2 synchronised** Azure Kinect Cameras, with data networked across 3 systems (**VR,Physical space and AR**) using **Photon PUN2**
 - Made **custom models** and **3D scenes/assets** with custom shaders to improve viewer appeal.
 - Game designed in **Unity** and **C#** used for over 30 custom scripts.
- **NFL Data Analysis:**
 - Analysed the offensive performance of NFL teams during the 2018-2023 seasons using over **4 Machine Learning** techniques.
 - Generated **10+** visualisations including graphs, play-simulations and heat-maps, to explore the success of the 4 main play types (**running, passing, punting and field goals**).
- **3D Graphics Renderer:**
 - Created a 3D rendered image using **C++**, built from the ground up without existing frameworks except **GLM and SDL2**.
 - Program renders Cornell Box using techniques such as **wireframe rendering, rasterising and ray tracing**.
- **Conway's Game of Life with Distributed System:**
 - Co-developed Conway's Game of Life, using **GO's goroutines** to design a **multi-threaded** game implementation.
 - Completed a distributed systems solution of the game, hosted on **AWS**, which allowed a **2.94x** decrease in runtime compared to a serial implementation.