

EXPERIENCE

- **Plasmarc Studios** London, UK
Game Studio Director & Software Engineer Oct 2020 - Present
 - **Startup:** Founded a company to support the development of a video game project called “Containcorp” coded in the **Unity Engine** framework using **C#, ReactJS (UI)**.
 - **Teamwork:** Working within a team of developers to create the product, involving use of Kanban boards, MOSCOW prioritisations and agile sprints.
 - **Algorithms:** Game relies on complex and novel algorithms to model simulation systems. Implemented **A* pathfinding algorithm** for NPC simulations with support for multi-floor pathing. Implemented **Room Detection algorithms**, Fluid Dynamics simulations using custom **Cellular Automata** model, and **Novel Utility AI** implementation for NPC decision making.
 - **Community:** Launched a small but growing Discord community with 100+ members. Earnt **£400+** revenue off Patreon page
 - **Website:** Developed a responsive website in 3 weeks to promote the game.
 - **Dedication:** Continually push regular update blogs amassing 50+ blog posts detailing development.
- **Ansham Associates LTD** Folkstone, UK
Architect Assistant/Python Developer 2017
 - Presented a project to create software that monitors and models all data concerning a house.
 - Met the deadline and software specification by cooperating with the boss throughout the 6 days.
 - Recieved a commendation after demonstrating 5 pages of research and development.

PERSONAL PROJECTS

- **2023. Portfolio Website:** Created a portfolio website to showcase my web development skills, and my projects.
- **2023. GPT Powered AI Discord Bot:** Successfully prototyped a **GPT-powered Discord Bot**, achieving human resemblance in trials, created in **Python** with the goal of mimicking human-like interactions with users.
- **Ongoing. Bartending Story Game:** Creating a bartending visual novel game in Unity Engine in my spare time, with hopes to release by the end of 2025.
- **2023. Card Party Game Mobile App:** Created a multiplayer mobile app for a card game I designed, using **ReactJS** framework for frontend and **Node-JS** and **Socket.IO** for backend hosted on **AWS**.
- **2022. Flow IDE:** Created a python based VIM-like **command line IDE**.
- **2020. C# Galaxy System Simulation:** Simulated a 100+ star galaxy system with celestial bodies using **C# and Unity Engine Framework** implementing procedural generation of planetary systems with fully simulated orbits. Structured the system according to density wave theory, creating characteristic spiral arms with 100+ stars, and designing the orbit model using 3-dimensional rotation matrices on oblate spheroid equations. Solved methods to produce “realistic” planet surfaces using stacked noise functions.

DEGREE PROJECTS

- **71% Year 3 Dissertation Project:** Found tangible solutions for ageing populations by expanding the Sugarscape simulation model to include altruism, and investigating its impact on an ageing population in Japan. Implemented In **Python**.
- **100% Python 3D OpenGL Engine:** Achieved full marks creating a 3D engine using **Python** and **PyOpenGL**. Implements **ECS, LOD terrain, Gerstner Waves** and **dynamic sound**.
- **84% Project Manager and Frontend developer for “Catpocalypse” Pokemon Go-inspired Web game:** Achieved above average amongst peers, with an 84% grade as project lead to build a web app with **ReactJS** and **Django**. **Project Manager**, main Asset Artist and **main Frontend developer**.
- **90% “Boxify” Java File Compressor:** Achieved optimal speeds on compressing large files averaging 200-300kb/s with a Multithreaded File compressor built with a **Swing** user interface in **Java**.

PROGRAMMING SKILLS

- **Languages:** C#, Python, Javascript, C++, HTML/CSS, Java, PHP **Technologies:** ReactJS, Django, Unity
- **Skills:** Game Development, Software Development, Web Development, Graphic Design

RELEVANT EDUCATION

- **University of Exeter [Expected Grad. June 2024]** Devon, UK
Integrated MSci Computer Science; Target: First class honours Sep. 2020 – June. 2024
 - **Grades:** Second-year: 77.88% overall grade. **Third-year:** 71% overall grade.
 - **Relevant Module Grades:** ECM3423 Computer Graphics - 100% ECM1400 Programming - 84%
ECM1414 Data Structures and Algorithms - 73% ECM1400 Web Development - 78%

OTHER EDUCATION

- **Saint Olaves Grammar School** Grad 2020
A Levels: Physics - B — Biology - B — Math - B. 2018 – 2020
- **Saint Olaves Grammar School** Grad 2018
GCSEs 2013 – 2018
 - **Grade 9 (A*+):** Physics, English Language
 - **Grade 8 (A*):** Biology, Chemistry, History, Computer Science
 - **Grade 7 (A):** Math, English Literature, Art

OTHER EXPERIENCE

- **Scope** Orpington, UK
Store Assistant 2018
 - Volunteered at a charity shop for 6 months learning useful management and organization skills.