

Cameron Main

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SUMMARY

An eager and hardworking Computer Science graduate with a passion for game development and a proven track record of effective teamwork. Possessing a strong foundation in both theoretical knowledge and practical application, I thrive in collaborative environments where I can contribute my skills while also learning from others. My experience working on group projects, both during my academic life and external projects, has honed my ability to communicate effectively, adapt to diverse perspectives, and leverage the strengths of each team member to achieve shared goals.

SKILLS

C# | C++ | Unity (5+ years) | Unreal Engine 5 | Python

Git/VCS | Object-Oriented Programming | Game A.I. Programming (GOAP, BTs, FSMs, etc.) | NLP/LLMs

EDUCATION

Bachelor of Science in Computer Science

Newcastle University • Newcastle-upon-Tyne • 2023 • 2:1

- Awarded 'Best Team Project' by The School of Computing faculty for the second-year team project module.

Software Engineering & Development Level 3 Extended Diploma

Gateshead College • Gateshead • 2020 • D*D*D*

CERTIFICATIONS

Level 3 Award in Statistical Methods

Gateshead College • 2019

PROJECTS

Electronic Components Price Checker (University Team Project)

Python, Flask, CSS, AWS RDS

- Entailed working 1-to-1 with an external industry stakeholder.
- Understanding stakeholder requirements & communicating effectively with them and my team.
- The solution involved creating a bespoke electronic components price checker using OctopartAPI.
- Utilised Python with the Flask framework and deployed to an AWS RDS running MariaDB on the backend.
- Had the responsibility of managing scrum sprints & task delegation during stand-up meetings.

Turn-Based Dice Roller Game

C#, Unity, HLSL

- Prototype game inspired by Yahtzee mechanics.
- 3D physics-based dice rolling mechanic with dice face value detection using trigger colliders.
- An intricate scoring system with multiple dice combinations and multipliers.
- Interactive UI for dice selection, rerolling, and score calculation using camera stacks and layered canvases.
- Enemies of increasing difficulty as player progresses.

Dissertation Research Project

C#, Unity, Python, ChatGPT API, spaCy

- The research aimed to evaluate the effectiveness of 3 different Non-Player Character (NPC) dialogue interaction methods in video games.
- Incorporated a novel method of interaction using NLP and LLM AI tools, such as spaCy & ChatGPT API, within the Unity game engine.
- Successfully implement & compared conventional NPC dialogue interaction methods, conducted user research, as well as explored open & closed domain dialogue generation systems.

L-System Visualiser

C++, SFML, ImGui

- A C++ application, built following OOP principles, featuring L-system procedural generation.
- Enables the creation of fractal geometries for simulated environments (trees in this instance).
- Includes a rendering module using SFML for on-screen visualisation.

Further Projects

Many more projects can be seen on my portfolio and in greater detail with sample code:

<https://www.cameronmain.com>
