Cameron McGrath-Johnston

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OBJECTIVE

Keen to contribute to the exciting, fast-moving global world of software development. Looking forward to developing my skills to help further advance their use in cutting-edge applications which have a transformative impact in society.

PROFILE

Passionate Computer Science graduate and an experienced programmer with a passion for programming and design. I have honed my skills in problem solving, thinking analytically, and project management; with a strong programming background in languages including C#, Python and Java. I have 3 years of experience across multiple roles. Directed and took part in many projects professionally, academically, and for personal interest. Projects have included: software, games, and web development.

EDUCATION

BSc (Hons) Computer Science (Software Engineering) - *University of Hertfordshire*   09/2021 – 05/2024
Grade: 1st Class Honours, 4.0 GPA
Thesis: *Development of a prototype FPS game for the comparison of aim assistance algorithms*

A-Levels - *Beaumont Sixth Form*   09/2019 - 06/2021
Maths A*, Computer Science A, Further Maths B, Physics B

WORK EXPERIENCE

Student Proctor - *School of Physics Engineering & Computer Science, University of Hertfordshire*   06/2022 – 06/2024
The first computer science trained member of a team of selected students assisting with technical support tasks including: laser cutting and 3D printing, managing inventory, data handling, event preparations, and supervising student lectures and projects. Learnt and utilised Fusion360, LaserCAM, Asset Panda, and Teams. Personally led and co-ordinated the creation of a robotics training document, now adopted for training new team members to program in Python. Our team was recognised in the Vice Chancellor's Awards 2023 as Team of the year.

Game Design Intern - *Adaptive Systems Research Group, University of Hertfordshire*   06/2023 - 10/2023
Led the novel research of cutting-edge software solutions leveraging procedural content generation for LARP games using ChatGPT. Utilising the generative capabilities of the OpenAI API for ChatGPT, I was able to create a prompt that fit within the 4096 token limit whilst maximising the immersion and gameplay experience of the game world. Developed a Jupyter Notebook to communicate with the API. My work included version control with GitHub, UI design with HTML/CSS, and utilizing libraries. The project was well-received, with 100% of playtesters providing positive and constructive feedback.

Research Assistant - *Bioengineering & Instrumentation Research Group, University of Hertfordshire*   06/2022 - 12/2022
In a key research role, I explored the mechanical properties of polymers for 3D-printed dentistry, demonstrating expertise in CAD with Fusion360, laser cutting, data analysis, and 3-point testing. I executed comprehensive testing and analysis on over 100 samples and crafted design files for more than 15 unique 3D-printed dental components. My development of a broad skill set significantly contributed to industry-targeted research, aiming to revolutionize dental practices worldwide.

Python Programming Tutor - *Bita Consulting*   01/2022 - 09/2022
Guided and educated primary-age children, managing classroom groups of 15-30 and conducting individual and group sessions online via Teams. My teaching focused on data types, branching, and best software practices. In leading over 40 lessons, I created an open learning environment, igniting students' curiosity. This was reflected in the pupils' keen interest and unanimous positive feedback from parents, demonstrating the lasting impact and passion for programming that I shared with them.

ACHIEVEMENTS

- 51-page thesis. Research-based with Unity implementations. Evaluating 3 aim assistance algorithms in FPS
- Self-published platformer game with 140+ page post-mortem documentation
- Completed Electronic Arts (EA) Software Engineering and Product Management virtual internships on Forage
- Go Herts Gold Award for initiative outside of studies
- Most committed player award for basketball, invested over 200 hours training throughout the year

SKILLS

- Python, Java, C#, C++, HTML, CSS
- Version control, agile, kanban, object-oriented programming, functional programming
- Full-stack development: front-end and back-end
- Fusion 360, Blender, SolidWorks, Unity
- Teamwork, Communication, Adaptability, Leadership, Project Management, Research