CAMERON McGrath-Johnston

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PROFILE

I am a third year BSc Computer Science Student at the University of Hertfordshire and an experienced programmer with a passion for games development. In my free time, I enjoy exploring technologies such as 3D printing and graphics manipulation, as well as researching open-source software and learning how it works. I am keen to start my career in the exciting, fast-moving global world of games development; and am looking forward to developing my skills to help further advance its use in innovative games which have can have a positive impact on society. Outside of my studies, I am excited to be currently working on a project investigating the potential for modern AI within game design in a games research internship.

EDUCATION

9/2021 – present ***University of Hertfordshire, Hatfield, Herts.***
BSc (Hons) Computer Science (Software Engineering)
1st year: 4.34 GPA
2nd year: 4.03 GPA

9/2019 - 6/2021 ***Beaumont School Sixth Form, St Albans, Herts.***
A-Levels
Maths A*, Computer Science A, Further Maths B, Physics B

9/2014 - 6/2019 ***Beaumont Secondary School, St Albans, Herts.***
GCSEs
Maths 9, Physics 9, Design & Technology 9, Computer Science 8, Chemistry 8, French 8, Biology 7, English Lang. 6, Geography 6, English Lit. 5

WORK EXPERIENCE

6/2023 – present **Games Design Research Intern** - ***Games Research - University of Hertfordshire***
Developing a set of software-based solutions for a project based on procedural content generation for chamber LARPs using ChatGPT. Programmed in a Python Jupyter Notebook to communicate with the OpenAI API, using GitHub for version control and file sharing, UI design with HTML and CSS, researching and making use of existing libraries. With the aid of a PhD student, we have plans to migrate the system to run on a local machine to erase any reliance on APIs; and then run group testing to perform qualitative analysis and write a research paper for publication.

6/2022 – present **Student Proctor** - ***School of Physics, Engineering & Computer Science – University of Hertfordshire***
Working as part of a large managed team assisting with various tasks around campus for the school. Tasks have included: laser cutting and 3D printing, managing/stocking inventory, data handling, event preparations, supervising student project work on the new Conceive, Design, Implement, Operate (CDIO) engineering modules; and I was personally assigned to research and create a robotics training document for the team.

6/2022 - 12/2022 **Research Assistant** - ***Bioengineering & Instrumentation – University of Hertfordshire***
Student Research Assistant on a project investigating mechanical properties of dental polymers. Working independently as part of a team. My role includes CAD using Fusion360, 3D DLP printing, casting resins, laser cutting, experimental three-point stress testing, data input and processing.

1/2022 - 9/2022 **Independent Information Technology Tutor** - ***for Bita Consulting***
Teaching and assisting children from years 3 - 6 in classes of 15-30 pupils at two local schools and providing individual and smaller group sessions online via Microsoft Teams. Teaching Python to beginners and intermediates carefully to ensure everyone reached the same level of proficiency while still challenging those with more experience/curiosity for the subject. From this I learned to be able to clearly explain aspects of programming and tasks with clarity and patience.

CERTIFICATIONS

3/2023 – present **Harvard**
GD50, Introduction to Game Development

15/10/2023 **gi Academy at EGX**
GI Campus Passport completion at EGX 2023

6/2020 - 9/2020 **Imperial College London**
A-level Mathematics for Year 12 - Course 1: Algebraic Methods, Graphs and Applied Mathematics Methods

HARD SKILLS

- Adaptable to different programming environments: Unity, IDLE, Visual Studio, IntelliJ, LÖVE, BlueJ, Notepad++, Thonny, NetBeans, Replit, Arduino, SQL developer, XAMPP, command prompt, Jupyter, Emacs;
- Experience of programming in: Python, Java, Lua, C#, C, MySQL, Oracle, HTML, CSS, JavaScript, C++;
- Version Control and file management via GitHub;
- Mathematics and Physics – including vectors, matrices, algebra, statistics, and calculus;
- 3D modelling and animation – Fusion 360, Blender, Unity;

SOFT SKILLS

- Adaptability;
- Communication;
- Creativity;
- Collaboration;
- Critical thinking;
- Empathy;

ACHIEVEMENTS

- Million Makers best in year raising funds for the Prince's Trust, 2017. Achieved by partnering with another team to increase success and support each other. Demonstrates drive and collaboration;
- Most committed player award for Basketball, 2016, Beaumont School. Demonstrates reliability;
- 4th KYU (Purple Belt) Karate - TISKA, St. Albans. Demonstrates persistence;
- Swimming Personal Survival Award, Level 2 and Silver Award Kellogg's / ASA. Demonstrates willingness to learn;
- RSL Level 1 Award in Popular Music Performance - Grade 1 in drums. Demonstrates organisation;
- Full UK driver's licence. Demonstrates independence;

INTERESTS


Model making using CAD and rapid prototyping techniques including prop weapons from sci-fi games;


Gaming – competitive fps, looter shooters, rpg, mmos, co-op games, story driven, strategy, gacha;


VTubing – Live streams entertaining a small community and handling sponsors;


Building/Upgrading PC components – built own gaming PC, and assisted friend with specifications, potential upgrades, and performing upgrades on my own and others' PCs;


Cooking – especially baking for my family – I love macarons! They're so yummy;


Reading fiction, manga, comics, and game lore;

REFERENCES

Christoph Salge - Reader in Artificial Intelligence in Games - University of Hertfordshire - c.salge@herts.ac.uk
Richard Kaye - Research and Development Engineer - University of Hertfordshire - r.kaye2@herts.ac.uk
Vincenzo De-Bellis - Principal Technical Officer (H&S) - University of Hertfordshire SPECS - v.de-bellis@herts.ac.uk
Huria Kelifa - Independent IT Strategy Consultant - Bita Consulting - Info@bita-consulting.co.uk