James McKenna

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Personal Profile Statement

I am a highly motivated Master's Computer Science graduate, who is exceptional at finding new ways to overcome current problems. I am always willing to find the most suitable solution to any problem that I am given.

Education and Qualifications

Liverpool Hope University (2018 – 2022)

MSc Advanced Computer Science (Distinction – 76.33%) 10/2021 – 10/2022

- Dissertation – Using The Things Network and the BBC Micro:Bit to improve Education and Safety (92%).
- Internet of Things – Created a classroom system using the BBC Micro:Bit to encourage anonymous communications between students and teachers (92%).
- Virtual Reality – Developed a virtual room where users can interact and manipulate objects to help regulate emotions (92%).
- Artificial Intelligence (B+ in the exam and A in the coursework).
- Theoretical Computer Science (C in the exam).
- Numerical Methods (C in the exam).
- Big Data Analytics – Used Ubuntu and Apache Pig to process big data and create conclusions based on the data that was analysed (76%).

BSc (Hons) Computer Science (1st Class – 75.85%) 10/2018 – 06/2021

- Dissertation – Using Genetic Algorithms to play Sonic the Hedgehog (1991) (76%).
- Introduction to Computer Science (Additional) (A).
- Introduction to Computer Science (A).
- Explorations in Computer Science (Core 2) (AA).
- Explorations in Computer Science (AA).
- Advanced Studies in Computer Science (Core 1) (A).
- Advanced Studies in Computer Science (Core 2) (A).

Blessed Thomas Holford Catholic College (09/2011 – 06/2018)

A-levels and BTEC's:

- 3 GCE A-levels in Computer Science (E), History (C), and Creative Media (Distinction).

GCSE's:

- 10 GCSE's grade A-D including C in English and B in Mathematics.

Technical Skills

- Experience in Python, Java, JavaScript, PHP, C, C# Script, and MicroPython.
- Python programming – using libraries such as Pandas, OpenAI, and NEAT to create a genetic algorithm. Also using SQLite3 to make database and SKLearn to create a machine learning algorithm to predict the movement of a stock on the stock market.
- Experience in HTML and CSS mark-ups, including JavaScript with A-Frame to create a VR game, which can be played on a locally hosted website.
- Development of Artificial Intelligence and Machine Learning, particularly the Bachelor's degree dissertation.
- Using IoT and VR devices to create solutions to problems, such as the BBC Micro:Bit v2 with a LoRa node and a Raspberry Pi 3 Model B with a LoRa Gateway HAT to create a network gateway to receive and process incoming data from transmitters. Additionally, the Oculus Quest 2 was used as a developer kit device to create a VR project in Unity using C# Script.
- Exceptional knowledge using Microsoft office applications, such as Excel and Word.
- Experience in SQL, such as MySQL and SQLite3.
- Good knowledge of Big Data analysis using Apache Pig and Ubuntu.

Additional Skills

- Capable of completing tasks to a high standard on time, meeting deadlines for university coursework and portfolios.
- Great communication skills.
- Creating my own code during my spare time to improve my understanding of certain programming languages and technological features (see my GitHub page).
- Team working skills were improved when I joined the Peer Action Collective at YPAS, which encourages communication and listening to others.

Work Experience / Employment

IT assistant, The Christie NHS Foundation Trust, Manchester, 2017

- Imaged new software and operating systems.
- Created new ports for the network.
- Managed new devices for staff.
- Worked in a small team to manage security.
- Shadow placement with a Python developer at the Applications Department.

IT assistant, Blessed Thomas Holford Catholic College, Manchester, 2017

- Managed the school's database for new upcoming sixth form students.
- Recommended operating systems for school computers.
- Helped resolve technical issues for teacher's devices.

Assistant at Trendz Barber Shop, 2018

- Handled payment slips to employees.
- Cleaned the shop floor and dealt with customer payments.

Young Ambassador and Online Changemaker, YPAS (Young Persons Advisory Service), Liverpool, 2022

- Encourage cooperation as a group and bring new ideas to reduce youth crime across Merseyside.
- Created an IoT device using the Micro:Bit to reduce sexual violence and bullying in the classroom, which was approved by YPAS.
- Connect with companies and council officials to discuss new ideas to help young people.

Interests and Hobbies

- Interest in Artificial Intelligence, IoT, and new technologies.
- Built my own desktop PC, and usually repairs computers for family and friends.
- Gaming during my spare time to overcome obstacles and find new ways to improve gameplay.
- Created a zombie map for Black Ops 3, using Radiant, as a side project with university colleagues.
- Enjoy fitness and exercise to benefit my physical and mental health; highly motivated to improve myself. I also joined the Powerlifting society at university to gain further knowledge and to improve my form and lift heavier weights. The society also helped with social skills amongst the society members.