Rory Byrne

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EDUCATION

University College London — London, United Kingdom
BSc Computer Science — *Sep. 2024 – June 2027*
- Currently on track to achieve a First Class

Wheatley Park School — Oxford, United Kingdom
A-Levels and GCSEs — *Sep. 2017 – June 2024*
- Achieved A*A*A* in Mathematics, Computer Science, Physics, and A in Further Mathematics AS
- Achieved 11 GCSEs at grades 7-9

EXPERIENCE

Waiter — July – Sep. 2024
The Seven Stars at Marsh Baldon — *Oxford, United Kingdom*
- Worked closely with other waiters to ensure smooth operations
- Efficiently managed multiple tables and orders
- Developed strong communication skills through daily interactions with customers

ISIS Synchrotron Group Work Experience — June – July 2023
Rutherford Appleton Laboratory — *Didcot, United Kingdom*
- Worked in teams developing graphical user interfaces in Python to help accelerator physicists understand proton beams
- Responsible for creating peak and loss finders for live MQTT beam intensity monitor data using NumPy
- Employed the agile methodology, regularly presenting our progress to our clients and implementing feedback
- Delivered a comprehensive presentation on our GUI and project journey to a panel of physicists

PROJECTS

Bioreactor System | *C, Arduino* — Oct. – Nov. 2024
- Developed a simulation of a small-scale vaccine bioreactor utilising Arduinos for the different subsystems
- Set-up an IoT cloud service to receive data via MQTT form our bioreactor and to allow remote execution of subsystems
- Optimised physical components such as heaters and motorised stirrers to ensure compatibility and performance for our use-case

Twin-Stick Shooter Game | *Python, SQL* — Sep. 2023 - March 2024
- Developed a twin-stick shooter game in Python using Pygame where the player must defeat hordes of enemies
- Designed an account system with logins and character customisation for personalised player experiences
- Implemented a multiplayer mode, power-ups, varying enemy types, increasing difficulty, and a leader board using a MySQL database to enhance player engagement
- Employed the agile methodology, adjusting to limitations and adapting the design based on continuous testing

AWARDS AND ACHIEVEMENTS

- Distinction award and Best in School in Elite Bebras Computing Challenges 2022 and 2023
- Senior Kangaroo award and Best in School in Senior Maths Challenges 2022 and 2023
- FUZE Wheatley Park Excellence in Computing 2023 award
- Achieved 100th percentile out of all Computer Science applicants in the UCL STAT admissions test
- Achieved 10th in the UK in the Náboj International Mathematics Competition 2023 working in a team of 5
- Achieved runners up out of over 1200 schools in the Ritangle 2023 competition working with my peers

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, HTML, SQL
Developer Tools: Git, GitHub, Jupyter
Libraries: MySQL, NumPy, Matplotlib, Bootstrap