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GitHub: <https://github.com/onlysilvercrow>

Education:

University of Bristol

Sept 2018 – Sept 2022

Mechanical and Electrical Engineering (MEng), 2.1

Relevant Modules: Robotics UG, Bio-Inspired Artificial Intelligence, Python Programming, Coding Theory, Robotics and Control

Wembley High Technology College

Sept 2011 – July 2018

A Levels: Maths (A*), Further Mathematics (A), Physics (A), Chemistry (A)

GCSE's (7A*s, 10As, 1B) including Mathematics and English

University Projects:

Python Programming

- Coding automated & manual encryption/decryption using Caesar Cipher, learning the importance of structured and maintainable code
- Made 2D ping pong game using Tkinter module for GUI and learning game design elements such as proper hitbox creation

Robotics UG

- Learnt C++ to be able to program a micro-controller onboard a Pololu 3Pi+ robot to automate line following task
- Coded PID controller and adapted it to estimate slope inclination angle using the feedback signal
- Gained experience debugging hardware and software systems

Bio-Inspired Artificial Intelligence

- Improved MATLAB programming skills by creating a species recognition model for wide area animal monitoring using drones
- Worked as a team to create a business model spanning from initial funding methods to estimating time taken to regain capital investments as well as ethical and regulation considerations

Extra-curricular Activities:

Website Development

- Graphs F1 data from online API – Fastest lap times and race lap times for drivers
- Currently working on obtaining live data over UDP connection from F1 2022 game for real time display
- Backend created using node.js, later refactored to Azure Functions for cost-savings
- Frontend created using React

Bristol Electric Racing (Electrical Team)

- Designed and assembled RTDS (Ready-To-Drive-Sound) and pre-charge circuitry for an electrical car to participate in Formula Student Competition
- Learnt proper practices for PCB circuit design and use of lab equipment (oscilloscopes and power supplies)
- As part of multidisciplinary team, I had to communicate with various departments such as manufacturing for circuit placement on chassis and housing design
- Reported weekly progress to team lead ahead of preliminary design review presentation

Bristol Robot Wars Competitor

- Designed, 3D printed and assembled a robot to compete in Robot Wars.
- Improved CAD skills using Autodesk Inventor.

Hobbies

- In my free time, I like to play badminton and basketball.

Skills

IT/Programming: Javascript, HTML, CSS, Python, C++, MATLAB, MS Office

CAD: Autodesk Inventor, Ultimaker Cura

Multilingual: English, Hindi, Gujarati