Edmund Goodman

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Education

Warwick University Sept. 2020 - June 2024
MEng Computer Science *Coventry, England*

The Perse Sixth Form Sept. 2018 - June 2020
A-levels in Maths (D2, eq. A), Further Maths (D3, eq. A*/A), Physics (D1, eq. high A*) and Computer Science (A*)* *Cambridge, England*

Experience

Software Engineering Intern July 2020 - Sept 2020
HUBER+SUHNER Polatis *Cambridge, England*

- Updated a testing harness for fibre optic switches from python2 to python3
- Refactored the VBA backend of an excel spreadsheet used for corporate planning, created visual representations for the aforementioned planning data
- Wrote a Java implementation of NETCONF call home (https://tools.ietf.org/html/rfc8071) for the open source ONOS project

Software Engineering Work Experience July 2017
Argon Design *Cambridge, England*

- Refactored and redesigned an information display board, converting a monolithic file into a series of microservices running with a python LAMP server, in order to serve the updated UI

Projects

Engineering Education Scheme | *Python, C++* Sept. 2019 - Apr. 2019

- Lead the software aspect of the school "Engineering Education Scheme" entry, building an autonomous tennis ball collector to the help sports teachers - Project link , Video
- Implemented first principles image recognition for tennis balls, using CLAHE, median blurs, laplacian transforms, and the Hough circles algorithm
- Wrote search algorithm to find the balls, and interfaced with the drive and flywheel motors to collect them
- Contributed to the hardware aspect, manufacturing parts of the shell, and battery and flywheel mountings
- Wrote command line and graphical interfaces to remotely control the robot, allowing both manual and automatic modes

Rouse Research | *Python* Sept. 2019 - Apr. 2019

- Received a Distinction for a project titled "How effective are machine learning algorithms compared to traditional analytical techniques with respect to play abstract games" Project link
- Derived and implemented neural networks from first principles, including using back-propogation to train them to play noughts and crosses optimally
- Implemented genetic algorithms to play noughts and crosses, and compared their efficacy to neural networks
- Implemented tree search algorithms, including minimax with alpha-beta pruning

Acheivements

Music: Trinity Guildhall Grade 8 Trumpet, ABRSM Grade 7 singing, Pro Corda national chamber music finalist, previous head chorister of Jesus College Choir
Cyber Security: Reached the final round of the Cyber Discovery competition, hence attending two SANS courses, SEC504: "Hacker Tools, Techniques, Exploits, and Incident Handling", and FOR500: "Windows Forensic Analysis"
Gold Crest award, and Gold level industrial cadet: Awarded due to completing the EES project mentioned above
Air Cadet Leadership Course: One of 240 each year to graduate a demanding week long course at RAF Cranwell teaching practical leadership skills, where I learned how to plan an exercise, communicate effectively, and command a team of nine other cadets

Technical Skills

Languages: Python, Java, Haskell, Bash/Zsh, C, VBA, Javascript with jQuery, BASIC, PHP, HTML, CSS, SQL