

Edmund Goodman

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EDUCATION

Warwick University

MEng Computer Science

Coventry, England

Sept. 2020 - June 2024

The Perse Sixth Form

A-levels in Maths (D2), Further Maths (D3), Physics (D1) and Computer Science (A)*

Cambridge, England

Sept. 2018 - June 2020

EXPERIENCE

Software Engineering Intern

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Jul 2020 - Sept 2020

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, which is in the process of being upstreamed into the main codebase

Software Engineering Work Experience

Argon Design

Jul 2017

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-propagation 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, Bash, VBA, Javascript with jQuery, BASIC, PHP, HTML, CSS, SQL