

EDUCATION

Wilson's School

Sep 2016 - Present

Senior Prefect - House Captain

A-Level Predicted: A A* A* A* (Further Mathematics, Mathematics, Physics, Computer Science)*

AS-Level Achieved: A A A A A (Further Mathematics, Mathematics, Physics, Computer Science, Economics)

GCSE Achieved: 11 Grade 9s (Mathematics, English Language and Literature, Triple Science, R.S, History, Business Studies, Latin, French)

EXPERIENCE

Wilson's School

Sep 2022 - Present

Senior Prefect, Senior Editor and Founder of Problem Solving Club

London

- Provided customized coaching to students to improve their mathematical problem-solving abilities.
- Managed a team of 4 writers for the Computer Science section of Wilson's STEM Magazine, ensuring high-quality articles within strict deadlines.
- Coordinated and increased participation in school events as a House Captain, collaborating with other student leaders and teachers to deliver successful events.

Sara Consulting Services

July 2022 - Sep 2022

Intern

London

- Streamlined financial processes by developing VBA macros to automate invoice generation and implemented extended functionality to accurately record company transactions in MS Excel.
- Shadowed senior software consultants in client meetings and gained valuable insights into software design and development, including debugging, testing and documentation of code.

Mott MacDonald

Nov 2021 - Apr 2022

Inspiring Engineers Program - Software Lead

London

- Developed a flood risk assessment software POC in Python by modeling flooding using Saint Venant equations and integrating live hydrology data from DEFRA APIs. The software allowed stakeholders to identify high-risk areas, estimate the severity of flooding and take appropriate measures to mitigate risk.
- Experimented with an additional method using regression analysis to estimate water level changes over time.
- Collaborated in a team to analyse flood alleviation methods for the Isle of Wight, and developed a reservoir model as a potential solution.
- Utilized strong communication and presentation skills to effectively pitch the team's proposal to engineering consultants

NOTABLE PROJECTS

ThePhiloMath.co.uk

- Programmed a blog using HTML, CSS and JavaScript where I published articles covering a range of technology topics.
- Interviewed Professor Kevin Buzzard on formalism in mathematics and its implications for automated theorem provers and proof assistants.

Research: Evaluating Methods for Natural Language Processing

- Researched and implemented recurrent neural networks for text classification and generation tasks using TensorFlow and Python, comparing their performance to traditional methods such as Naive Bayes Classifier and Markov Chains.
- Received the Templeton Scholarship Award for the best project in the computer science category, which recognized the technical depth and quality of the research

Maze Game

- Implemented a Python-based maze generator that produces both random and braided mazes, strictly adhering to object-oriented programming principles, and developed pathfinding algorithms to solve the generated mazes.
- Designed a user interface allowing users to interact with the maze game and compete to achieve the fastest completion time.

ACHIEVEMENTS

UKMT Senior Kangaroo:

Achieved Merit

Oxford University Computing Challenge:

Top 10% - Achieved Distinction

Southampton Maths Challenge:

Ranked 3rd in the UK

Cambridge Naboj Maths Competition:

Ranked 5th in the UK

Ritangle Maths Competition:

Finalist and Achieved Highly Commended

UK National School Badminton Competition:

Reached Quarter-Finals