Harry Findlay

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EDUCATION

University of Exeter, UK – *BSc Computer Science – Year 3* **2021 – 2024**

Achieving a 1:1 (79%) with modules focusing on:

- Object-Oriented / Procedural / Functional Programming
- Computer and Internet Systems
- Computational / Discrete Mathematics
- Linear Algebra
- Data Structures and Algorithms
- Artificial Intelligence and Machine Learning
- Computer and Network Security
- Computation and Complexity Theory

St John's Marlborough Sixth Form College **2019 - 2021**
A-Levels: *Computer Science (A*), Maths (A), Physics (A)*

St John's Marlborough **2014 - 2019**
10 GCSEs *with majority 8s, 7s and 6s*

RELEVANT PROJECT EXPERIENCE

Applying Deep Reinforcement Learning to Compiler Optimisation **Sep 2023 - Present**
C, C++, Python, GCC, Machine Learning
Exploring a novel area of research where I am developing an RL framework and applying modern machine learning methods like deep Q-learning with the aim to improve compiler optimisation and increase the performance of the output executables.

Predicting Future Natural Disaster Hotspots using AI Techniques **Dec 2023**
Python, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn
Implemented a range of supervised and unsupervised methods such as polynomial regression and DBSCAN to predict global temperature increases and forecast future natural disaster hotspots.

Nature-Inspired Ant Colony Optimisation for TSP **Dec 2023**
C++, Python, Pandas, Matplotlib
Researched the effect of various parameters and extensions to an ACO metaheuristic when applied to multiple TSP instances. A comprehensive research report summarised the findings which included a range of concise figures.

ExeChange, A Student-Focused Clothes Trading Marketplace **Feb 2023 – Mar 2023**
Python, Django, Django REST API, React, PostgreSQL, Git, Docker
Developed a bespoke e-commerce marketplace exclusive to Exeter students as a key part of a development team of six. Modern frameworks and agile development practices were employed to ensure completion within a demanding six-week timeframe.

Pathfinding Maze Solver **Mar 2023**
Python
Implemented multiple pathfinding algorithms to solve a range of complex mazes. This work was concluded with a written executive summary that provided explanations and diagrams for the algorithms that I chose to develop.

Multi-Threaded Card Game **Nov 2022**
Java, JUnit, Threading
Developed a multi-player card game using a paired-programming environment and test-driven development that utilised a unique thread for each player.

EXPERIENCE

ExCode, University of Exeter – *Programming Workshop Leader* **Oct 2023 – Dec 2023**
Taught up to 30 students at a time and enabled them to develop their skills further by providing information and guidance on extra resources as part of an initiative set up to allow anyone to learn the fundamentals of programming.

University of Exeter Cycling Club – *Welfare Officer* **Sep 2022 – Sep 2023**
Attended training on areas regarding safeguarding and welfare and was able to quickly and confidently answer any questions or concerns of members to ensure a safe and inclusive environment for all.

Samuel Jones, Exeter – *Front of House* **Nov 2022 – Feb 2023**

The Roebuck, Marlborough – *Front of House* **Jul 2022 – Sep 2022**

Marlborough Leisure Centre – *Lifeguard* **Feb 2019 – Sep 2021**

Marlborough Penguins – *Volunteer Swimming Teacher* **Feb 2016 – Sep 2021**

SKILLS AND INTERESTS

Cycling Technology Research Reading Environment Music