Andreas D Campbell

Email: andreasdcampbell@gmail.com
LinkedIn: https://www.linkedin.com/in/andreas-campbell/
GitHub: https://github.com/adc2502/Machine-Learning/   **Mobile**: +44 7305772533

EDUCATION

Newcastle University, Newcastle, England   Sep 2019 – June 2023
BSc Computer Science with Industrial Placement; 1:1 in first and second year.
   Projects include:
- Darwin Evolution Simulator using binary values for fitness (Python).
- A program that extracts gene data from an online source and analyses the protein sequences to produce statistical graphs (pandas in Python).
- Image Manipulation program using the Pillow Library with pixel manipulation (Python).
- Brown Coding debugging, finding solutions to 15 failed tests in a program made by an external party (Python).
- Worked in a team to build an EPOS system for a small business in Java.
- Brown Coding debugging, finding solutions to 20 failed tests in a program made by an external party (Java).
- Building a Java Lottery Web Application with an Apache Tomcat Server and MySQL database focused on security. I implemented password hashing, encryption and created an SQL injection filter.
- C project to demonstrate different approaches to maintaining the integrity of an inter-process communication (IPC) application.
- Built in C, a Reliable File Transfer (RTF) protocol that works on top of UDP and guarantees reliable delivery of a file between a client and a server.
- Machine Learning project in Python which categorises banking expenses using a multinomial naïve bayes model. The program returned a graph with the categorised results. Scikit-learn, pandas and matplotlib were the most used libraries in this project.
- Deep Learning convolutional neural network image classification project where I conducted a wide range of experiments in order to maximise my CNN's performance. The dataset was the CIFAR-10 dataset, and the main libraries were Tensorflow and Keras.

George Heriot's School, Edinburgh, Scotland   Aug 2012 – July 2019
Advance Higher: Mathematics (B), Computer Science (C)
Higher: Mathematics (A), English (A), German (A), Computer Science (B), Physics (C)

WORK EXPERIENCE

Software Engineering Intern, Amazon Web Services, Cagliari, Italy   June 2022 – Sep 2022
- Part of a Kanban team working on a high-performance remote display protocol that provides customers with a secure way to deliver remote desktops and application streaming from any cloud or data center to any device with AWS.
- I am implementing MacOS and Linux file system redirection to provide customers with the ability to mirror their local file system to their remote desktop. For this project, I am utilising multiple low level POSIX operations which requires me to program mostly in C. As well as C, I have gained experience with Rust and Protobuf for data serialisation.

Technology Placement, Morgan Stanley, London, England   June 2021 – June 2022
- Part of a Kanban team building a web application (Java, Spring, Angular, Typescript and MongoDB) with the goal of improving client engagement through shared ideas. The application utilises APIs to pull in the latest financial data for all our clients. Our model detects trends, anomalies, and news before sending it to the appropriate banker. The web application is now live withing the bank.
- Scrum master for two weeks where I led every daily standup and ran the retrospective at the end of the sprint.
- As part of my second rotation, I joined a new team where I used ETL tools to transform all options and futures data from the EUREX.
- Third in the London AI team competition where we were given the challenge of writing an algorithm that could play Ultimate Tic Tac Toe. I programmed the heuristics and the minimax algorithm we decided to use (Python).

Founder, BugHub, Newcastle, England   Sep 2019 – Sep 2020
- Created a company focusing on free website security auditing for new companies that don't have the luxury of a tech team.
- I conducted security audits, finding vulnerabilities in client's websites which were then outlined in the 'BugHub report'.
- Completed audits for three companies in the UK.

Tier 3 Call Handler, Track and Trace Public Health England, Remote   April 2020 – Sep 2020
- I made hundreds of calls to contacts of confirmed COVID-19 cases to collect their details and provide them with the correct advice.
- I also had training for multiple scenarios, such as safeguarding training for suspected child neglect cases.

Researcher, BugCrowd, Remote   Jan 2017 – Sep 2019
- Identifying security vulnerabilities in partnered companies.
- Successful bugs that I have identified and reported include:
    - An unauthorised redirect bug for SkyScanner.
    - An unauthorised redirect bug for Under Armour.

Research Assistant, Lausanne Business Solutions, Remote   July 2019 – Oct 2019
- Part of a team which generated data for an AI chatbot.
- This involved recording hours of conversations on various topics and transcribing them so that a chatbot can learn from the data.

Designers' Friend, Edinburgh, Scotland   May 2017
- Learnt how to create a database-driven website in Python using the Django framework.
- Django website which maps people's opinions based on their location (Python, HTML, CSS, SQL).

Technology Journalist, Hackread, Remote   April 2016
- Writing articles on the latest tech issues.
- Wrote '*Could Facebook Change Election Results?*' which anticipated the threat Facebook could impose on US democracy before the Cambridge Analytica scandal broke.
    - https://www.hackread.com/could-facebook-change-election-results/

SKILLS

Computer Languages: Python (confident), Java (confident), C (confident), Typescript (Intermediate), Rust (beginner), HTML, CSS, SQL
Familiar Technologies: pandas, Keras, TensorFlow, Matplotlib, MySQL, Linux, Git, Virtual Environments, Django Framework, Spring, MongoDB, Apache Servers, Talend, Angular, Jira, Jenkins, Protobuf, AWS (EC2)

INTERESTS

Team Leader, Refuge Network International, London, England   September 2021 – June 2022
- Leading walking groups around Victoria handing out food parcels to the homeless.
- Operating the clothes and toiletries stand at our weekly food bank.
- Photography during the walking groups for the charity's social media.

Volunteer, Grassmarket Community Project, Edinburgh, Scotland   May 2018 – June 2019
- Working alongside homeless people with mental illnesses.
- Twice a week I was involved with group activities such as teaching IT classes, walking groups and working in the cafe.

Sports: Boxing / Tennis / Ice Hockey