

Andreas D Campbell

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EDUCATION

Newcastle University, Newcastle, England

Sep 2019 – Jun 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

Technology Placement, Morgan Stanley, London, England

Jun 2021 - Present

- 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 being released to a pilot group in the coming weeks.
Scrum master for two weeks where I led every daily standup and ran the retrospective at the end of the sprint.
- Recently joined a new team as part of my second rotation where I am using 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 that focused 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 are 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** Jul 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.
- Crew Member, McDonald's, Edinburgh, Scotland** Jan 2019 – Aug 2019
- 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 a few 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 (beginner), Typescript (Intermediate), HTML, CSS, SQL
Familiar Technologies: pandas, Keras, TensorFlow, Matplotlib, MySQL, Linux, Git, Virtual Environments, Django Framework, Spring, MongoDB, Apache Servers, Talend, Angular

INTERESTS

- Volunteer, Refugee Network International, London, England** September 2021 – Present
- Recently began handing out food and clothes to homeless people around Trafalgar Square.
 - Although I only started two weeks ago, I will continue to attend every Saturday.
- 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 **Other:** Currently 2 weeks into the Machine Learning course by Andrew Ng.