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Prabhjot Grewal

Education

Imperial College London – MEng Computing
October 2018 – current (2022 Graduation Year)

- Upcoming 4th Year – Mathematics for Machine Learning | Deep Learning | Reinforcement Learning | Natural Language Processing | Machine Learning for Imaging | Advanced Robotics
- 3rd Year (**1st** and **Top 10% of Year**) – Computer Vision | Simulation & Modelling | Distributed Algorithms
- 2nd Year (**1st** and **Top 10% of Year**) – Probability and Statistics | Software Engineering Design
- 1st Year – Functional and OO paradigms and Data Structures | Graphs and Algorithms

Leicester Grammar School
September 2010 – July 2018

A-Levels: Mathematics, Further Mathematics, Computer Science, Physics – **A*A*A*A***; GCSEs: **10 A*, 1 A**
Extended Project Qualification – **A***: *"An Explanation of Machine Learning through Neural Networks and the possibilities and limitations of its implementation"*

- Made use of **Tensorflow** in Python for demonstrations and examples when presenting.

Experience

Google – Software Engineering Intern
Python *April – September 2021*

Joined Assistant, with my team focusing on testing and the reliability of the Next Generation Assistant.

- Investigated efficiency of manual QA testing of Critical User Journeys and possible optimisations.
- Performed **statistical analysis** of existing metrics and historical data for correlations to bugs found.
- Enabled **stability testing** for additional assistant platforms running on Android.
- Designed an automation pipeline to regularly track stability metrics and the stability of new changes.

Google – STEP Intern
Java, TypeScript *July – September 2020*

Attached to SRE team, observed challenges of supporting and developing critical infrastructure.
Coffee Chats – Software Development Project *(6 weeks)*

- Created platform to facilitate meaningful social interactions by matching people based on interests.
- Utilised Google Cloud APIs on Java servlet backend attached to **NoSQL** datastore, with **React** frontend.
- Collaborated in a pair to design, implement and present project, ran daily stand-ups to aid coordination.

Fire Tech Camp
August 2019

- Delivered technology-based courses at a summer camp involving Python, Java, and electronics.

Past Projects

Matterialize – A background removal application and platform for developing new matting techniques.

- Image manipulation pipeline written in **C++**, with a web-based GUI in **TypeScript** using **React**.
- Implemented multiple background removal strategies including using cutting edge research papers.

Event Kiwi – An event planning and discovery platform for university students to find and plan events.

- Designed and developed with an **agile** model, with bi-weekly client interviews and testing iterations.
- Used CI/CD pipeline to allow for rapid deployment to staging and production, with continuous testing.
- I worked on front-end development using **React** framework, interfacing with an Express backend server.

Hackathons

Shopwise: IC Hack 20 – **2nd Place** in Thought Machine's "Money for Good" category

- Created an application for self-service checkouts, designed for smaller retailers and independent business owners to keep up with larger corporations with more resources.

CatchIT: Google BGN Hackathon – **1st Prize**

- Developed a litter-picking rewards app using an on-device ML model to recognise rubbish.
- I created a RESTful API, running on Flask in Python, handling user and activity data in a SQL database.

Skills and Interests

Familiarity with Linux, Windows and version control using **git** and **Mercurial**.
Programming languages: **Java** | **TypeScript** | **Python** | **Scala** | **C** | **C++** | **Haskell**
I have interests in Machine Learning and Astrophysics, and recently photography. I also trained in Tae Kwon Do for over 10 years (2nd Dan Black Belt) and have taken up Boxing and Kabaddi while at university.