Mobile: (+44) 07541547734
Email: prab99uk@gmail.com

Prabhjot Singh Grewal

prabsg.dev
github.com/PrabSG
linkedin.com/in/prabhjot-s-grewal

Education & Qualifications

Imperial College London – Computing (BEng) *October 2018 – current*

- 1st Year studies: Functional and Object-orientated paradigms and Data Structures (1st – 84%) | Graphs and Algorithms (1st – 77%) | Discrete Mathematics | Logical reasoning | Databases | Computer Architecture.
- Coming year: Operating Systems | Compilers | Networks | Computational Techniques | Statistics | Prolog

Leicester Grammar School *September 2010 – July 2018*

A-Levels: Mathematics, Further Mathematics, Computer Science, Physics – A*A*A*A*
Extended Project Qualification: A*
GCSEs: A* with Distinction in Further Mathematics, 9A*, 1 A.

Past Projects

ARM Group Project *– C* *June 2019*

- Implemented an assembler and emulator for the ARM instruction set using C.
- Developed an adaptation of the Monte Carlo Tree Search algorithm to play a game of Connect Four as an extension. Visualised the games on a custom PCB with a handmade bi-colour LED-matrix.
- With a 10,000 cycle computational budget, the MCTS-based "Computer" was unbeaten, running in real-time on a Raspberry-Pi – requiring optimisation for speed and memory. Ranked as one of the Top 10 projects.

"eduCATe" project: IC Hack 19 *– Java* *January 2019*

- As a team of 4, we designed an instant messaging system that used a LAMP stack and incorporated file-sharing and scheduling for assignments and projects.
- I developed the front-end (an Android application written in Java), as well as implementing the data handling and parsing in the application's back-end using JSON files.

Android health-tracking application *– Java* *January – April 2018*

- Created the front and back-end design, implemented and tested an app using Android Studio.
- Used an agile model to be able to focus on user feedback in the design.
- I taught myself Java and used SQLite for data-storage on Android OS.
- Also incorporated statistical analysis on user data, displayed to the user with visual cues, to show trends in data and progress towards user-defined goals.

Extended Project Qualification *– Python, Tensorflow library* *2017-18*

- Titled: "An Explanation of Machine Learning through Neural Networks and the possibilities and limitations of its implementation". Researched the fundamentals of Machine Learning, followed by a more in-depth look at how Neural Networks were conceived, built, and now used.
- Created some small demonstrations using the TensorFlow library and the MNIST data set.

Experience

Fire Tech Camp *August 2019*

- Delivered technology-based courses at a summer camp involving Python, Java, and electronics.
- Prepared and trained for courses, where I had to engage children aged 9-15 in the course content.
- Presented to students and parents, communicating constructive feedback through written and verbal reports.

Young Scientists Journal *November 2016 – Aprill 2018*

- Co-lead and created our school's own branch of the Young Scientists Journal – scientific articles, experiments and research all written, designed and edited by 12-20 year olds – with role of Co-Editor and Design Director.
- Pitched, explained and marketed to students, parents, and the general public at events like the Big Bang Fair.

Skills & Interests

Familiar with Linux, Windows and version control using git.
Programming languages: Java | Python | C | Haskell
I have interests in Machine Learning and Astrophysics, and recently photography. I have also trained in Tae Kwon Do for over 10 years (2nd Dan Black Belt) and also taken up boxing.