

Aebel Shajan

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Location: Greater Manchester

EDUCATION

MMATH&PHYS Maths and Physics, University of Manchester 2019 - 2023
First class honours.

A-Levels, Thornleigh Sixth Form 2017 - 2019
A* Maths, A Further Maths, A Chemistry, B Physics.

GCSEs, Thornleigh Salesian College 2012 - 2017
9 Maths, 6 English, B IT, A* Science.

PROJECTS

MPhys Project: Classification of Antimicrobial Peptides

- Developed a graph convolutional neural network in Python using the TensorFlow library.
- Collaborated in a team of four, using Google Colab to collectively write over 1000 lines of code.
- Trained model on a large open-source data set of 20,000 molecules, achieving 75% model accuracy on unseen data.

MMath Project: Evaluation of the Pagerank Algorithm

- Recreated Google's Pagerank search algorithm using MATLAB software and applied the algorithm to the Reddit homepage.
- Investigated features of the algorithm using data analysis techniques in Python.
- Authored a written report and presented findings to an audience.

Laboratory work

- Coordinated with a lab partner and executed 6 lab experiments over 2 years.
- Incorporated Python data science libraries such as Pandas, SciPy and NumPy to analyse results.
- Co-authored 6 lab reports in cooperation with a lab partner.
- Gave 3 presentations using data visualisation techniques to convey findings to a professional audience.

C++ Quantum Circuits Simulator

- Developed a C++ command line application implementing object-oriented programming to simulate quantum gates and circuits.
- Produced a detailed report on the code architecture, documenting functions and algorithms.

JetBrains Academy Online Course

- Self-taught Java via JetBrains Academy's online course, completing five projects over two months.

PHYS20161 Introduction to Python

- Implemented Python with Numpy and Pandas libraries to mathematically model the parabolic motion of a ball.
- Completed over 12 weeks, achieving a grade of 82%.

EXTRA-CURRICULAR ACTIVITIES

Personal Website 2023

- Designed an interactive website on GitHub Pages leveraging HTML, CSS, and JavaScript to highlight coding expertise and portfolio.

Game Development 2019 - 2023

- Created 13 projects and games which obtained over 300 cumulative downloads.
- Partook in community events such as game jams and competitions.

Volunteer at Bolton Hospice 2017 - 2019

- Provided exceptional customer service while working as a cashier.
- Trained new volunteers, ensuring consistent service and operational standards.
- Administered daily cash transactions and maintained accurate financial records.

National Citizenship Service 2016

- Collaboratively raised over £500 for charity in just 2 weeks.
- Led a team of 8 in the restoration of a nursing home.