Qasim Nawaz

Software Engineer

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Skills

Proficient in: Java | Python | JavaScript
Experience in: C/C++ | SQL | Swift | OCaml | MATLAB | HTML/CSS | MIPS Assembly
Technologies: Git | Robotics | Agile | PyTorch | Keras | TensorFlow | UNIX | ReactJS | App Development

Education

The University of Birmingham (2017 - 2020) *Birmingham, UK*

- BSc Computer Science (Grade Prediction: 2.1)
- A degree with a focus on Artificial Intelligence, Mathematics, Robotics, Data Analytics, High-Level and Low-Level Programming as applied to theoretical and practical Computer Science.

King Edward VI Aston Grammar School (2014 - 2017) *Birmingham, UK*

- A-Levels in Chemistry, Biology and Mathematics, with an AS-Level in Psychology.

Saltley School and Specialist Science College (2009 - 2014) *Birmingham, UK*

- 11 GCSEs with 5A*/As including English Language (B), Mathematics (A) and Triple Science (A*AA).

Experience

Capgemini (July 2018 - September 2018) *Telford, UK*

Test Analyst | Test & Release Service

- Created testing files using data obtained via analysis of SQL-based relational databases.
- Improved quality of the codebase by conducting E2E testing on numerous modules, exposing bugs earlier in the development cycle.
- Worked towards revamping the automation testing system, which helped to drastically improve productivity by as much as 25% via more efficient allocation of time and resources spent on a project.
- Authored some documentation for internal use, giving an overview of the automation process.

Projects

Sentiment Analysis on Tweets Using Document Embeddings

Python | Keras | Gensim | NLTK | Pandas | NumPy | TensorFlow

- This is my final-year project (dissertation) which was an investigation into the various methods I could use to classify tweets by their sentiment.
- I trained word vector-based, and paragraph vector-based models on a dataset consisting of 1.6 million tweets, in conjunction with various classifiers in order to find the best performing method in which to obtain the calculated sentiment of unseen tweets.
- I designed and implemented all the various document representations, as well as the classifiers which included Logistic Regression, Cosine Similarity, Linear Discriminant Analysis, and multiple different forms of Neural Networks.
- In the best case, I obtained an accuracy of 79.6%, using a very specific document vector, coupled with a Neural Network classifier.

Pathfinder

JavaScript | HTML/CSS | ReactJS

- I built and designed a ReactJS web application that visualizes various pathfinding algorithms.
- I implemented Dijkstra's algorithm, A* search, Breadth-first search, and Depth-first Search, with plans to add further pathfinding algorithms.

Sorter

JavaScript | HTML/CSS | ReactJS

- I built and designed a ReactJS web application that visualizes various sorting algorithms.
- I implemented Bubble Sort, Heap Sort, Merge Sort, and Quick Sort, with plans to add further sorting algorithms.