Patricia Jadesola Bejide

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Education

University of Bristol (2021 - 2024)
Bsc. Computer Science
Year 1 - First Class
St Paul's Catholic School (2014-2021)
(2019-2021) **A Levels**: Computer Science (**A***); Mathematics (**A***); Business (**A***); AS Further Mathematics (**A**); EPQ (**A**)

Skills

Programming Languages Python, Golang, Java, SQL, C, Haskell, JavaScript
Tools SQLite, MySQL, Git, FastAPI, ReactJS, Spring Boot, AWS EC2 + S3

Experience, Honours and Awards

Teaching Support Role (October 2022-Present)
- Covering the modules Software Tools (Linux Administration and Web Programming) and Functional Programming (Haskell)
- Providing support for first year students with the course content and assistance with the lab exercises

Bristol Computer Science Society Treasurer (May 2022 - Present)
- Preparing and authorising a range of financial documents such as invoices, balance sheets and income statements.
- Budgeting effectively to manage committee funds whilst liaising with the President and Vice President.
- Collaborating with other committee members in meetings to delegate roles and report the committee's financial health.

Amazon Discover: Spring Technology Insights (April 2022)
- Participated in a 3 day virtual Spring Week.
- Collaborated in a seven member smaller group, mentored by a Junior developer.
- Pair programmed with a peer in several short-burst rounds, code reviewed by our mentor in between rounds whilst learning the importance of clean, maintainable code.
- Problem solved a series of challenges including implementing cache replacement policies for a weather app (written in Python) dependent on frequent HTTP requests.

Projects

Ephm3ral Music API & Music Recommender System (March 2022 - Present)
- Designed and implemented a light-weight Music REST API which acts as a Facade to the existing spotipy API which allows developers to build music applications with ease
- Technology stack used is Python with FastAPI and MySQL as the database.
- Uploads images to an AWS S3 Bucket using the JavaScript SDK for fast and efficient storage.

Social Recommender System (2020-2021)
- Designed a movie recommender system using data from the IMDb database.
- Exploited a form of collaborative filtering where nearest neighbours where restricted based on who a user follows to diversify how recommendations are generated.
- Coded in Python and data stored using a remote MySQL database and written in the Object Oriented Paradigm, programmed with an agile development process.

Competitions

BDSSxLV Datathon (March 2023)
- Won second place (Best Understanding of the Dataset Prize) as a team of 2.

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- Used pandas and matplotlib to generate bar plots of each feature in the dataset to analyse gaussian trends and remove features that didn't represent gaussian relationships.
- Used a range of machine learning methods, the best performing model being Logistic Regression with an F1 score of 0.899.

BDSSxLV Datathon (March 2022)

- Won second place (Innovation and Explainability Prize) as a team of 5 with a model score of 0.9558.
- Designed a binary classifier that used a training model of whether a customer received caravan insurance, written in Python and presented using Jupyter Notebook.
- Utilised feature engineering and linear regression to classify the unlabelled data set.

CSSxBoeing Hackathon 2022 (February 2022)

- Participated in the 24 hour hackathon as a team of 4 to build a vegan delivery service with a MongoDB, node.js, Express, Redux and React tech stack.
- Quality assured React components and provided UX content to ensure smooth navigation of the web application.
- Designed a database which stored entity details enabling my other team members to load the data into the web app using redux states.
- Programmed JavaScript code to allow for the iterative posting of data from user input into the database, POST handled by a REST API.

Coursework

Software Engineering Project (FlyTippingApp) - In Progress

- Created a cross-platform mobile app to allow users to make fly tipping incident reports with a reduced cognitive load compared to existing solutions
- Technology stack used is Flutter, Firebase Storage & Authentication and Cloud Firestore
- As project manager I was the main point of contact with the client and I managed the kanban board, allocating tickets to other members
- Designed UI and UX wireframes using Figma
- Set up continuously integrated code styling using GitHub actions to ensure clean and maintainable code and continuous development to generate APKs on push to main
- Consistently top 3 against other groups of 4-6 within the unit

Parallel & Distributed Computing (Game of Life) - 82%

- Designed parallel and distributed solutions to Conway's Game of Life (GoL) using Golang as part of a pair programming project
- The system architecture of the distributed solutions includes the worker nodes being set up as AWS EC2 instances, and the client and broker set up locally
- Designed a leadership algorithm to help bridge the communication gap between the broker and the worker nodes where Halo Exchange was used for each iteration of computing the GoL world
- Utilised an object oriented approach to manage the atomicity of access to produce race condition free code
- Produced a 4-page report generating benchmarks of each parallel and distributed system

Object Oriented Programming (Scotland Yard) - 84%

- Modelled the board game Scotland Yard in Java as part of a pair programming project.
- Used the strategy pattern to implement AIs for the protagonists and antagonist, using Minimax with Dijkstra's shortest path algorithm as an example heuristic.
- Streamlined AI runtime using alpha-beta pruning and weights.
- Designed low coupled classes which allowed us to test the methods of each concrete AI class independent of recursive calls from the Minimax implementation.
- Noted by markers as 'exemplary… near unbeatable-AI' with 'sophisticated tests for everything'