Patricia Jadesola Bejide

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Education

University of Bristol (2021 - 2024)
Bsc. Computer Science
Year 1 - First Class; Year 2 - 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 MySQL, Git, FastAPI, ReactJS, Spring Boot, AWS

Experience, Honours and Awards

Amazon Prime Video, SDE L4 Intern (June 2023-September 2023)
- Interned in a high-performance cloud computing team which vends content to customers at an international scale with high efficiency and availability managing millions of transactions per second at <10ms
- Automating the calculation of scaling forecasts for high velocity events such as the English Premier League and NFL Thursday Night Football for teams and their dependencies to scale their service fleets
- Reduced human error and speed up time taken to produce a scaling forecast
- Tech stack included an API Gateway Java backend application and ReactJS with Typescript frontend, with an AWS CDK managed pipeline
- Shadowed senior engineering SCRUM meetings where I am taking an active approach to learn advanced cloud computing concepts such as database sharding and load balancing high traffic applications

Teaching Support Role (October 2022-Present)
- Promoted from Demonstrator to Graduate Level 2 Teacher for the 23-24 academic year, mentoring students for the Software Engineering Project module
- Covering the modules Software Tools (Linux Administration and Web Programming) and Functional Programming (Haskell) in the 22-23 academic year
- Providing support for first year students with the course content and assistance with the lab exercises

Bristol Computer Science Society Treasurer (May 2022 - July 2023)
- 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)
- 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.

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- 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 were 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.
- 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 and implemented a database which stored entity details enabling my other team members to load the data into the web app using redux states.

Coursework

Software Engineering Project (FlyTippingApp) - 75%

- Created a cross-platform mobile app to allow users to make fly tipping incident reports with a reduced cognitive load compared to existing solutions, leading development as project management
- Technology stack used is Flutter, Firebase Storage & Authentication and Cloud Firestore with CI/CD
- Designed UI and UX wireframes using Figma, verifying accessibility with online tools and client feedback

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 alongside a 4-page report analysing benchmarks
- Implemented a broker-worker node system architecture with AWS EC2 instances
- 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

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, streamlining 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'