Vali Hameed

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Education

Lancaster University Sept 2024 – Present

- Computer Science BSc with Honours (Year 2) - Expected First Class
- First Year Average - 70%

Experience

Temporary Software Developer, DigbySwift – Leeds, ENG June 2023

- Gained proficiency in **Dart** and **Flutter** by independently developing a **cross-platform mobile app** that allows users to search for movies/TV series and view details such as posters and release dates.
- Learned and implemented **unit testing** principles to verify code functionality and ensure software quality.
- Managed project version control using **Git** and **GitHub**, employing a feature-branching workflow with pull requests for code review before merging into the main branch.
- Gained hands-on exposure to **Microsoft Azure** for hosting client websites and supporting business operations.

Projects

Tram Network Pathfinding Visualizer

- **Engineered a desktop application in Java** to calculate and visualize the shortest route between two stations on a tram network.
- **Applied Object-Oriented Programming (OOP) principles** to design a robust graph data structure, modeling stations, connections, and paths as distinct Java objects.
- **Implemented classic search algorithms such as Dijkstra's and A*** to efficiently determine the most optimal path based on connection weights.

UFC Fight Predictor

- Developed a **machine learning model** in **Python** to predict UFC fight outcomes by training a **Logistic Regression** classifier on a historical dataset of over **6,000** fights.
- Engineered features by processing and cleaning a raw CSV dataset using the **Pandas** library, managing missing values and transforming categorical data into a model-ready format.
- Implemented the end-to-end prediction pipeline using **Scikit-learn**, covering data splitting, model training, and evaluation to deliver winner predictions with associated confidence scores and an accuracy of **65%**.

2D Racing Game

- Directed a full-cycle project by **translating stakeholder requirements** into a functional design, implementing features through an **iterative SDLC**, and **incorporating user feedback** to ensure all success criteria were met.
- **Developed a 2D top-down racing game in Python using the Pygame library**, implementing core mechanics such as vehicle physics, pixel-perfect collision detection, lap/time tracking and a local leaderboard.

Portfolio Website

- **Developed a performant and SEO-friendly personal portfolio** by leveraging the **Static Site Generation (SSG)** capabilities of the **Next.js** framework.
- **Implemented a fully responsive and modern UI** using the utility-first approach of **Tailwind CSS**, ensuring a seamless user experience across all devices (desktop, tablet, and mobile).

Technical Skills

Languages: Java, Python, Dart, JavaScript, SQL

Frameworks/Libraries: Flutter, Next.js, Tailwind CSS, Pygame, Java Swing

Tools & platforms: Git/GitHub, Unit Testing, Docker