

# Vali Hameed

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## Education

### Lancaster University

Sept 2024 – June 2027

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

## Experience

### Co-Founder & Full-Stack Developer, Picky Eater – Lancaster, ENG

October 2025 – Present

- **Co-founded** a startup developing a **scalable web application** with **Django, React, MongoDB** and **PostgreSQL**.
- Led **CI/CD** integration using **Git** and **GitHub Actions**, **improving** deployment **efficiency**.
- Collaborated in a **cross-functional** team of developers using **agile sprints**.
- **Built a live collaboration feature using WebSockets**, enabling **sub-100ms** message delivery.

### Temporary Software Developer, DigbySwift – Leeds, ENG

June 2023

- Developed a **cross-platform mobile application** from concept to completion using **Dart** and **Flutter**, delivering a user-centric movie and TV series search tool and **reduced** app search time by **25%**.
- Ensured code reliability and software quality by implementing comprehensive **unit tests**.
- 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.
- Contributed to business operations by assisting with the management of client websites on **Microsoft Azure**.

## Projects

### Orbital Risk

- **Architected a mission control dashboard** using **Next.js 14** (a **react** framework) and **TypeScript**.
- **Engineered a real-time 3D visualization** system to map satellite orbits and debris fields, using **WebGL** and **Three.js**. Enabling interactive trajectory analysis for safe launch planning.
- **Implemented a custom risk assessment engine** that calculates collision probabilities by processing orbital parameters (altitude, inclination, corridor width, time of launch) against real-time debris density datasets.
- **Developed a Python-based weather prediction service** to analyze atmospheric conditions and generate automated Go/No-Go launch recommendations through **FastAPI** endpoints and an **XGBoost** model.

### UFC Fight Predictor

- Developed a **machine learning** model in **Python** to predict UFC fight outcomes by cleaning and processing a dataset of over **6,000** fights with **Pandas** before training a **Logistic Regression** classifier with a **66%** accuracy.
- Designed, built, and **shipped** a full-stack prediction app, containerizing a **FastAPI** backend with **Docker** and deployed to **AWS ECS**.
- Developing a secure **RESTful** API using **Java Spring Boot** and **Spring Security**, managing user data with **Spring Data JPA** and a containerised **PostgreSQL** database using **Docker**.

### Tram Network Pathfinding Visualizer

- **Engineered a Java desktop application** to visualize shortest routes between stations, applying **OOP principles** to design a robust **graph data structure** and implementing **Dijkstra's algorithm** for efficient pathfinding.

## Technical Skills

**Languages:** Java, Python, Dart, JavaScript, TypeScript, SQL, C, C++ , Haskell

**Frameworks/Libraries:** Flutter, Next.js, Tailwind CSS, React, Pandas, Scikit-learn, Fast API, Spring Boot, Django

**Tools & platforms:** Git/GitHub, Unit Testing, Docker, AWS, PostgreSQL, MongoDB, MySQL, Vercel, Render