

Arjun Sridhar

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EDUCATION & QUALIFICATIONS

BEng (Hons) Computer Systems Engineering

Queen Mary University of London | 2021 – 2025

- Relevant modules: **Software Engineering, Web Programming, Algorithms, OOP, Database Management, Backend Development, Big Data Processing, Game Development, Image Processing, Integrated Circuits**
- **Inventory Management Flutter/Firebase mobile application**

Vidya Mandir Senior Secondary School | 2008 – 2020

- 12th Board (A-levels): **Physics (B1), Chemistry (A2), Math (B1), Computer Science (A2), English (A2)**

WORK EXPERIENCE

FURIOUS FOX | Backend Developer – [Equity-Match](#) | 2023–2024 (Industrial Placement Year)

- Authored and tested 50+ REST APIs using Node.js/Python, reducing bug reports by 30% and increasing code reliability
- Optimized MongoDB/SQL operations, cutting data retrieval times by 30% and enhancing database efficiency, while improving API quality through Postman testing and documentation, lowering bug reports
- Implemented JWT/CSRF tokens and Passport.js for robust security, trimming unauthorized access
- Collaborated with a team of 5 senior developers, accelerating development and achieving key project milestones

MIND | Q-tech - Student Intern | 2021 – 2022

- Led 15+ client meetings and implemented requirements
- Produced a model that resolved 10 design flaws and 5 security vulnerabilities, strengthening system stability
- Integrated client feedback into design improvements, resulting in increased user engagement
- Demonstrated team leadership and problem-solving efficiency

PROJECTS

Pixel Forge - Image Processing Application - [Repository](#) | 2025

- Directed a Java Swing desktop application for advanced image manipulation, implementing 20+ features, including grayscale conversion, arithmetic operations, power-law/log transforms, bit-plane slicing, and convolution filters (Gaussian, Sobel, Laplacian)
- Added noise reduction (min, max, median filters) and thresholding (simple, automated) while designing a modern UI with FlatLaf, featuring a splash screen, tabbed interface, and undo/redo functionality using a stack-based approach
- Applied OOP principles for modular, maintainable code with robust error handling, ensuring efficiency and scalability

Edge Sense - Predictive Maintenance for IoT Devices – [Repository](#) | 2025

- Objective: Developed a machine learning model to predict equipment failures using sensor data from IoT devices
- Developed a machine learning model using Python, Scikit-learn, and XGBoost to detect equipment failures from IoT sensor data, computing Remaining Useful Life (RUL) and classifying failures
- Addressed class imbalance with SMOTE Tomek and optimized hyperparameters using Bayesian Optimization, incrementing model performance based on F1 score, ROC AUC, and confusion matrix
- Deployed the model for real-time failure prediction using Joblib, enhancing accuracy and enabling regular maintenance to reduce downtime

Recommendations Engine for Charlton Athletic FC - [Repository](#) | 2024

- Created a recommendations engine using **Python, SQL**, and **Tableau** to optimize player selection for the 2024-2025 season
- Applied **Random Forest** and **K-Means** algorithms to analyze player data and find the top 3 players in 10 positions in a real-world dataset
- Presented findings to the team, offering actionable data-driven insights.
- Enhanced decision-making with detailed visualizations and performance metrics leveraging Tableau **and** Mat plot

SKILLS

- **Programming:** C++, JavaScript, Python, Java, C#
- **Web Development:** HTML, CSS, PHP, Bootstrap, ReactJS, Node.js, Django, Express.JS
- **Data Science & Machine Learning:** Pandas, TensorFlow, NumPy, Scikit-learn, XGBoost, K-means, Random Forest, SMOTE Tomek, Tableau, Power BI, Apache Spark, Kafka
- **DevOps & Cloud:** Docker, Kubernetes, OpenShift, Git, Bitbucket, Maven
- **Databases:** MongoDB, MySQL
- **API Tools:** Postman, Insomnia
- **Certifications:** IBM Backend Development Professional. Meta Certified Backend Developer.
- IBM Data Science Professional (in progress)