Agalya Ayyadurai

Details

United Kingdom
ayyadurai.agalya@gmail.com

Links

LinkedIn

GitHub

Portfolio

Skills

Python

SQL

Machine Learning

Dash (Visualisation)

MLflow

Jira

Postman

Continuous Learning

Analytical Thinking

Adaptability

Problem-Solving

Leadership

Certifications

Financial Forecasting with Big Data (LinkedIn)

The Data Science of Economics, Banking, and Finance (LinkedIn)

Education

MSc Data Science with Professional Postgraduate Year at University of Surrey | 2019 - 2021

B.E. Industrial Engineering at College of Engineering Guindy, Anna University | 2008 - 2012

Profile

Data Scientist and Data Analyst with expertise in machine learning, data analytics, and delivering business-driven insights. Skilled in **Python**, **SQL**, **PySpark**, and **Dash**, with experience building end-to-end data pipelines and collaborating with **cross-functional** teams. Passionate about aligning technical solutions with business goals, driving innovation, and delivering scalable AI solutions. Committed to **continuous learning** and fostering collaboration to empower impactful outcomes.

Employment History

Data Scientist, siHealth Ltd, Didcot, UK

JANUARY 2024 — PRESENT

- **Machine Learning Development**: Built and optimised a **LightGBM** model for indoor-outdoor detection, achieving a **16% improvement in F1 score** through feature engineering and hyper-parameter tuning.
- **Real-Time Analytics**: Developed an interactive **Dash dashboard** for real-time data exploration and model performance evaluation, enabling swift, informed decisions.
- **Automation & Tracking**: Automated data workflows with **MLflow**, streamlining preprocessing, training, and performance tracking for reproducibility.

Production and QA Manager, siHealth Ltd, Didcot, UK

NOVEMBER 2021 — DECEMBER 2023

- **Agile Collaboration**: Managed agile cross-functional teams, delivering **4+ projects** aligned with business goals while fostering collaboration between designers, developers, and stakeholders.
- **Process Efficiency**: Improved team efficiency by **25%** through agile practices like sprint planning and **Jira automation**.
- **Automation**: Implemented **Postman API monitoring**, proactively identifying system issues to minimise disruptions.
- **Stakeholder Solutions**: Automated workflows using **custom Jira forms**, saving **20% in operational costs** by streamlining stakeholder requests.

Data Science Projects

Fraud Detection System [GitHub]

- **Objective**: Developed a system to detect fraudulent transactions, balancing **precision-recall trade-offs** for accurate identification.
- **Key Contribution**: Engineered temporal features using **PySpark**; achieved **AUC 0.97** and **Precision 89.23%** with a **Logistic Regression** model.
- **Future Work**: Plan to integrate advanced visualisations with **Tableau** to better communicate fraud detection insights to stakeholders.

Financial Analytics System [GitHub]

- **Objective:** Built a platform for financial trend forecasting using time-series data.
- **Key Contribution:** Integrated **AWS** services, including **S3** for file storage, **Lambda** for real-time data processing, **RDS** for **PostgreSQL**, and **EC2** for hosting an OpenVPN server. Automated data ingestion from the OANDA API into PostgreSQL and trained an **LSTM** model. Transitioned to local open-source solutions to optimise costs.