

Vigneshwaran Vijayan

AI/ML Engineer | Data Scientist | Data Engineer

London, UK | +44 7346 880941 | vvigneshwaranmca@gmail.com | [linkedin.com/in/vigneshwaran-v-84a5801b0](https://www.linkedin.com/in/vigneshwaran-v-84a5801b0) | github.com/vigneshwaranvijayan | vignesh.vwvtech.in

PROFESSIONAL SUMMARY

AI/ML-focused software engineer and MSc Artificial Intelligence candidate with 2+ years of experience in Python, data pipelines, SQL/NoSQL databases, AWS, real-time analytics, and production data operations. Hands-on portfolio work spans applied machine learning, LLM/RAG, computer vision, time-series modelling, graph analytics, federated learning, reinforcement learning, model serving, and AI evaluation. Seeking AI/ML engineering, data science, applied ML, Python, and data-focused software roles.

TECHNICAL SKILLS

Programming: Python, JavaScript, R, PHP

AI & Machine Learning: Machine learning, deep learning, predictive modelling, anomaly detection, time-series analysis, computer vision, graph ML, reinforcement learning, federated learning, explainable AI, LLM/RAG

Libraries, BI & Analytics: Scikit-learn, Pandas, NumPy, OpenCV, Power BI, Tableau, feature engineering, model evaluation, data visualisation

Data & Cloud: PostgreSQL, MySQL, MongoDB, ETL, data cleaning, data validation, JSON, XML, HTML, AWS EC2, S3, Lambda

Software & Data Engineering: REST APIs, data integration, production data pipelines, testing, Git, model-serving concepts, real-time analytics systems

PROFESSIONAL EXPERIENCE

Junior Software Engineer | Aggregate Intelligence India Pvt Ltd, Coimbatore, India | *Jun 2024 - Oct 2025*

- Built Python and Node.js pipelines to ingest, clean, transform, and format large structured and semi-structured datasets for production analytics.
- Automated extraction, preprocessing, validation, and formatting across HTML, JSON, and API-style sources, improving repeatability and data quality.
- Managed PostgreSQL, MongoDB, SQL, and AWS EC2 data operations, including production troubleshooting, deployment support, and quality checks.
- Integrated live fare data for the Faretrack product, supporting near-real-time analytics, reporting, and reliable data availability.

Software Engineering Intern | Aggregate Intelligence India Pvt Ltd, Coimbatore, India | *Sep 2023 - May 2024*

- Developed Python scripts for data collection, cleaning, transformation, and validation of HTML, JSON, and structured datasets.
- Supported PostgreSQL operations, data-quality checks, automation scripts, and reporting workflows for internal analytics teams.

EDUCATION

Master of Science in Artificial Intelligence | Brunel University London, UK | 2025 - Present

Relevant modules: Machine Learning, Deep Learning, Artificial Intelligence, Data Visualisation, Quantitative & Predictive Data Analysis, Modern Data & Critical Analysis

Master of Computer Applications | Erode Sengunthar Engineering College, India | 2022 - 2024

Bachelor of Science in Physics | Vivekananda College, Madurai, India | 2019 - 2022

PROJECTS

Dataset-Grounded Explainable AI Copilot for Operational Decision Support

Developed an LLM and retrieval-augmented generation copilot that analyses operational datasets, validates supporting evidence, and generates source-grounded recommendations with explainable outputs.

Intelligent Multi-Model Routing and AI Serving Platform

Built an AI inference gateway that routes requests based on model capability, latency, cost, and confidence, with fallback handling, API-based model serving, and performance monitoring.

Industrial Visual Anomaly Detection Platform

Built a computer-vision pipeline for industrial defect detection using image preprocessing, deep feature extraction, anomaly scoring, threshold calibration, explainability, and model-performance evaluation.

Graph Fraud and Anti-Money Laundering Detection Platform

Developed a graph-based machine learning system for identifying suspicious entities and transactions using relationship features, community detection, anomaly scoring, and investigation-ready risk outputs.

AI Reliability and Evaluation Platform

Developed a reusable evaluation framework for measuring model quality, grounding, robustness, bias, drift, latency, and regression performance across AI and machine learning systems.

PUBLICATIONS

- **Analytical Review and Implementation of Modern Gradient Descent Techniques.** Kristu Jayanti Journal of Computational Sciences, 5(1), 15-25. [Article](#) | [DOI: 10.59176/kjcs.v5i1.2539](https://doi.org/10.59176/kjcs.v5i1.2539)
- **Unveiling the Ethics of Data Scraping Preservation: Balancing Access and Privacy.** Springer, pp. 515-525. [DOI: 10.1007/978-3-032-10016-0_40](https://doi.org/10.1007/978-3-032-10016-0_40)

ADDITIONAL EXPERIENCE

Customer Assistant (Part-time) | Marks & Spencer, London, UK | Mar 2026 – Present

Maintain reliable customer service, teamwork, and professional communication while completing postgraduate study in the UK.