SAKTHIVEL VINAYAGAM

Data Scientist | Data Analyst | Machine Learning Engineer | BI Developer

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SUMMARY

MSc Data Science candidate with 3 years of professional experience at Infosys, delivering data analysis, workflow automation, and BI solutions across retail, finance, and healthcare. Skilled in Python, SQL, R, Tableau, and Power BI, with practical expertise in machine learning, NLP, forecasting, and predictive modelling. Experienced in building pipelines, automating reporting, and developing dashboards that improved decision-making. Actively seeking opportunities in the UK as a Data Scientist, Data Analyst, Machine Learning Engineer or BI Developer.

SKILLS

Programming & Databases: Python, R, SQL, MySQL

Machine Learning & NLP: ML Algorithms, Deep Learning, NLP, Time Series Forecasting, Predictive Modelling

Frameworks & Libraries: Scikit-learn, TensorFlow, Keras, PyTorch, Hugging Face Transformers

Data Visualisation & BI: Tableau, Power BI, Excel (Advanced)

Data Engineering & Tools: ETL Pipelines, Data Preprocessing, Model Deployment, GitHub

Professional Practices: Agile/Scrum, Stakeholder Collaboration

Business Impact: Stakeholder Reporting, Predictive Analytics, Data-Driven Decision-Making, KPI Tracking.

EXPERIENCE

[Infosys Limited](#) – Senior Systems Engineer   Chennai, India | Sep 2021 – Sep 2024

As a Senior Systems Engineer at Infosys, I delivered analytics and automation solutions for enterprise clients across retail, finance, and healthcare. My work combined **SQL/Python data engineering** with **BI delivery (Power BI, Tableau)** to provide timely, accurate, and actionable insights for decision-makers.

Key Projects & Responsibilities

Retail Analytics – KPI Automation

- Partnered with analysts to define KPIs (churn, sales growth, repeat purchases) and built **Python, SQL pipelines** to extract and validate sales/operations data.
- Implemented **data cleansing logic** to reduce reporting errors by **30%**.
- Automated weekly KPI packs in **Power BI**, cutting preparation time from 10 hrs to 2 hrs and giving 20+ regional managers real-time visibility of customer trends.

Finance – Operational Efficiency Analytics

- Built **ETL workflows** merging transaction logs and call-centre data, standardising formats for unified analysis.
- Applied **regression and queueing analysis** to identify bottlenecks, enabling a **12% staff reallocation** and **15% SLA improvement**.
- Presented insights through **Tableau dashboards**, improving transparency with senior stakeholders.

Healthcare – Customer Support Data Monitoring

- Designed **API ingestion pipelines** integrating >50k support tickets/month into SQL databases for real-time monitoring.
- Built **Tableau dashboards** segmenting tickets by severity and resolution time, enabling priority routing of high-impact issues.
- Added **SQL anomaly detection checks** that cut incident resolution delays by **20%**.

Core Contributions

- Delivered analytics solutions that drove measurable business impact (efficiency gains, SLA improvements, reporting accuracy).
- Collaborated across cross-functional teams, bridging technical and business stakeholders to ensure data insights informed strategy.
- Mentored junior engineers in Python, SQL, and BI development, accelerating onboarding and capability growth.

PROJECTS

Mental Health Signal Detection (NLP, Transformers) · Python, PyTorch, Hugging Face   *Jan 2025 – Sept 2025*

Built an NLP pipeline on **18k+ Reddit posts** to classify mental health risk levels (low/medium/high). Fine-tuned DistilBERT with pooling and dropout strategies, applying cross-validation to optimise macro-F1. Demonstrated ability to apply deep learning and transformer models to real-world social data while communication findings effectively.

Weather–Crime Trends Analysis (Colchester, UK) · R, ggplot2, plotly, leaflet   *Feb 2025 – May 2025*

Analysed 16k+ crime records alongside weather datasets to identify seasonal trends. Developed interactive and animated visualisations that revealed temporal and spatial crime shifts, deriving actionable insights for public safety through time-series and correlation analysis.

Stock Return Prediction (Finance) · Python, Scikit-learn, TensorFlow/Keras   *Feb 2025 – Apr 2025*

Designed financial indicators (moving averages, RSI, volatility) and applied models including SVM, Random Forest, and Neural Networks. Predictions were evaluated using Sharpe Ratio and MSE, with SVM and Linear Regression emerging as the most reliable approaches to support investment decision-making.

Additional Projects:

- **Portfolio Optimisation (Finance)** – CAPM + regression modelling with efficient frontier visualisation (Python).
- **Laptop Review Topic Modelling (NLP)** – Applied BERTopic/LDA to extract key themes and cluster brands by sentiment (Python).
- **Biodiversity Modelling (Ecology)** – Regression and cross-validation to explain ecological variation (R).

EDUCATION

University of Essex, Colchester, UK

Master of Science in Data Science | Oct 2024 – Sept 2025

Anna University, Alagappa College of Technology (A.C. Tech), Chennai, India

Bachelor of Technology in Pharmaceutical Technology | Aug 2017 – Apr 2021

CERTIFICATION

British Airways - Data Science Job Simulation (Forage)

Tata Group – Data Visualisation: Empowering Business with Effective Insights Job Simulation (Forage)

BCG X – Data Science Job Simulation (Forage)