

Tanushree R. Dalvi

tanushreedalvi72@gmail.com | <https://tanushreedalvi.co.uk/> | +44 7554509948 | Guildford, UK | www.linkedin.com/in/tanushree-dalvi-797b0331a/ | <https://github.com/tanushreed72> |

Professional Summary

MSc Data Science student with strong hands-on experience through coursework, projects, and research in data analysis, machine learning, statistical modelling, NLP, databases and cloud platforms. Skilled in translating data into insights, building predictive models, and communicating results through dashboards and reports.

Education

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| University of Surrey Guildford, United Kingdom | MSc. Data Science Merit | 2025-2026 |
| University of Mumbai Mumbai, India | BSc. Computer Science CGPA: 8.58/10.0 | 2021-2024 |

Academic Projects

MicrobiomeBot- Explainable AI System for Microbial Interaction Inference | Python | Explainable AI

- Designed and developed an explainable AI system to infer microbial interactions from biological data using logic-based machine learning for interpretable predictions.
- Built an end-to-end pipeline covering data preprocessing, model development and explainability analysis to identify key interaction patterns.
- Developed an interactive Flask-based chatbot enabling natural language queries and dynamic data visualisation for intuitive exploration of results.

Lloyds Banking Group Data Science Job Simulation on Forage | Random Forest | scikit-learn | Python

- Completed a job simulation involving customer churn prediction for the Data Science & Analytics team at Lloyds Banking Group.
- Developed and implemented a predictive model using random forest and other machine learning algorithms, achieving an ROC-AUC score of 0.5.
- Conducted advanced data preprocessing, including handling missing values, encoding categorical variables, and feature scaling, utilising Python libraries such as pandas, scikit-learn, and matplotlib.
- Performed comprehensive model evaluation and tuning, optimising hyperparameters with GridSearchCV, and applied feature importance analysis to derive actionable business insights

BCG Data Science Job Simulation on Forage | Random Forest | scikit-learn | Python

- Completed a customer churn analysis simulation for PowerCo, demonstrating advanced data analytics skills, identifying essential client data and outlining a strategic investigation approach.
- Conducted efficient data analysis using Python, including Pandas and NumPy. Employed data visualisation techniques for insightful trend interpretation.
- Engineered and optimised a Random Forest model for customer churn prediction. Model evaluation showed strong overall accuracy (90%) and a ROC-AUC of 0.66; however, performance on the minority churn class was limited (recall: 3%) due to class imbalance.
- Developed a concise executive summary for the team, delivering actionable insights for informed decision-making based on the analysis.

British Airways Data Science Job Simulation on Forage | Web Scraping | Python | Predictive Modelling

- Completed a simulation focusing on how data science is a critical component of British Airways' success.
- Scraped and analysed customer review data to uncover findings.
- Built a predictive model to understand factors that influence buying behaviour.

Machine Learning & Data Mining | Python | scikit-learn

- Regression and classification models, feature engineering, train/test splits, model evaluation (MSE, R², ROC, confusion matrix).

Cloud & Big Data Analytics | BigQuery | Looker Studio | Google Cloud

- Designed data pipelines using Google Cloud Storage, BigQuery, BigQuery ML, Looker Studio, and Cloud Run.

Natural Language Processing | BERT | RoBERTa | BiLST | Google Colab

- Implemented and evaluated CRF, BiLSTM, BERT, and RoBERTa models for biomedical text classification with detailed error analysis.

Social Buzz Analysis | Microsoft Excel | PowerPoint

- Simulated a data analyst engagement with a social media client at Accenture.
- Analysed 7 datasets to identify social media content trends and presented data-driven insights for strategic decision making.

Customer KPIs | Power BI | Excel | PowerPoint

- Built Power BI dashboards to analyse HR KPIs and identify executive-level gender balance insights through structural solutions and professional correspondence.

Skills

Technical Skills

- Programming & Querying: Python, SQL, R,
- Data Analysis & Machine Learning: pandas, NumPy, scikit-learn
- Data Visualisation & BI: Power BI, Looker Studio, Excel (Pivot Tables, VLOOKUP)
- Databases & Warehousing: MySQL, PostgreSQL, MongoDB, BigQuery, Microsoft SQL Server (SSMS, SSAS)
- Tools: Google Cloud Platform, Amazon Web Services, Jupyter Notebook, Google Colab, Visual Studio, Azure Virtual Machine

Additional skills: Communication, analytical problem-solving, collaborative project experience, time management, stakeholder- facing reporting.

Certifications

- Data Analyst Skillpath: Zero to Hero in Excel, SQL & Python Udemy
- PwC Switzerland Power BI Job Simulation, Forage
- Accenture North America Data Analytics and Visualisation Job Simulation, Forage