PRATIKRAJ MUGADE

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SKILLS

Programming & Query Languages: Python (Scikit-learn, GeoPandas, PyTorch), SQL, R.
Data Engineering: Snowflake, dbt, Airflow, ETL Pipelines, Workflow Orchestration, DAG Development, Data Modelling, Star Schema, Data Warehousing
ML Deployment & APIs: FastAPI, Flask APIs, Streamlit, Docker, Model Inference, REST APIs
Cloud & Development Tools: AWS (AWS S3, Amazon EC2), Git, GitHub, Jupyter Notebook, Google Colab.
Data Processing: Pandas, NumPy, Data Transformation, Data Ingestion, Data Validation
Data Warehousing Concepts: Dimensional Modelling, Fact & Dimension Tables, Batch Processing

EXPERIENCE

Research Assistant - Pollinatework Sensibee™ Project | Kingston University   (contract) Mar 2025 – Aug 2025
Role- *Data Engineer*
- Built data processing pipelines for IoT-generated drone imagery and metadata, enabling operational performance reporting
- Cleaned, validated, and standardised **10K+ records**, improving data quality and reliability for analytics and executive reporting
- Automated anomaly detection and reporting workflows, reducing manual effort by **20%** and supporting scalable **European deployments**

Data Science Intern – Healthcare & Cybersecurity Analytics | Netsoft Technologies, India   May 2023 – Dec 2023
- Built **ETL workflows** and **Streamlit dashboards,** reducing reporting turnaround **time by 40%.**
- Developed **anomaly detection models** improving identification of high-risk cases
- Optimised data preparation workflows, **improving reporting efficiency and client delivery.**

PROJECTS

Customer Analytics Data Pipeline — Snowflake, dbt, Airflow *(Flagship Project)*   Dec 2025
- Designed **star-schema** data warehouse enabling scalable analytics for revenue, customer, and product data
- Built **dbt staging and mart models** with automated tests, improving data integrity and reliability
- Developed **Airflow DAG** with custom data quality checks, delivering analytics-ready datasets with reduced manual intervention

Deep Learning Insect Classification System — CNN, FastAPI, PyTorch   Jan 2025
- Developed CNN and transfer-learning models for insect classification, achieving **98.73% accuracy**, and curated a **10K+ image dataset**, reducing training time by **40%**
- Deployed real-time inference service using **FastAPI**, enabling image-based predictions; recognised with **Best MSc Project Award**

Geospatial Crime Data ETL Pipeline — Python, Pandas, GeoPandas   Nov 2024
- Built **ETL workflows** to **ingest, clean, and transform** UK crime datasets
- Delivered analytics-ready datasets and visualisations supporting **spatial trend analysis**

Forest Cover Analysis — Large-Scale Data Processing Pipeline   Jul 2024
- Processed and transformed **581K+ records** using scalable Python data pipelines.
- Implemented feature engineering and validation workflows to ensure **pipeline performance and data quality**

EDUCATION

Masters (Msc) Data Science, Kingston University **(Distinction)**   **Graduated : 2025**
Bachelors - Major in Mechanical Engineering & Minor in Computer Science Engineering   **Graduated: 2023**
Shivaji University, India   **(Distinction)**

ACHIEVEMENTS

- **Best MSc Project Award (Joint Winner), Kingston University, 2025** — recognised for outstanding deep learning research and analytics dashboard reporting
- **Co-author, peer-reviewed publication — BMC Proceedings, 2025** — BeSafeBeeHoney: Exploring Beekeeping Innovations and Science (DOI: 10.1186/s12919-025-00347-z)
- **Certifications: AWS Certified Cloud Practitioner;** DeepLearning.AI **CNN** Certification; **Tableau** and **Power BI**
- **BAJA SAE India** — **All-India Rank 4** (M-BAJA) and **Rank 16** (E-BAJA) — led engineering design and performance optimisation in national competition with 200+ teams.