DEVSHREE MANISH DESHMUKH

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EDUCATION

MSc Advanced Computer Science — University of Leicester, Leicester, UK | Jan 2024 – Jun 2025 | **Distinction**

Relevant modules: Big Data & Predictive Analytics; Internet & Cloud Computing; Mobile & Web Applications; Interaction Design & UX; Computational Intelligence; Software Engineering.

BTech Electronics and Telecommunication — Symbiosis Institute of Technology, Pune, India | Jul 2019 – Jun 2023 | GPA 7.11/10 (UK 2:1 equivalent)

Relevant modules: Data Structures (C); Computer Networks; Artificial Intelligence; Databases; Cyber Security; Probability & Stochastic Processes.

EXPERIENCE

Machine Learning Intern

Cad and Cart (Spire3D Technologies Pvt. Ltd), Pune, India | Jan 2023 – Aug 2023

- Developed predictive ML models in Python to optimise business KPIs; improved model accuracy by 15% through feature engineering and hyperparameter tuning.
- Built and automated SQL + pandas pipelines processing 5M+ records/week, including data quality checks and validation steps to improve reliability.
- Collaborated with cross-functional stakeholders to translate requirements into model features and communicate insights clearly.
- Applied anomaly detection and evaluation workflows to improve generalisation and support transparent, responsible model use.
- Contributed to documentation and deployment planning, supporting end-to-end delivery from data preparation to stakeholder-ready outputs.

SKILLS

- Excel (PivotTables, Power Query, dashboards), SQL (joins, CTEs, window functions), Python (pandas, NumPy, scikit-learn).
- Power BI (data modelling, visuals, basic DAX), Tableau (interactive dashboards, calculated fields), KPI reporting, data storytelling for non-technical audiences.
- Data cleaning, validation checks, data quality monitoring, documentation; PostgreSQL/SQLite.
- PyTorch, Keras, OpenCV, EfficientNet, U-Net; model training, evaluation, and deployment.
- Git/GitHub, REST APIs, Jupyter/Colab, VS Code; basic AWS (EC2, S3 – project based).
- matplotlib, seaborn, Plotly; exploratory data analysis, statistical visualisation, correlation analysis.

PROJECTS

MedSegment — Tumour Measurement and Medical Imaging Analysis Tool | GitHub

MSc Dissertation — Awarded Distinction & Prize Certificate | University of Leicester

- Built a full-stack AI web application for MRI tumour analysis using PyTorch models served via Flask and backed by PostgreSQL, deployed on AWS EC2 GPU (g4dn.xlarge).
- Implemented ingestion and preprocessing pipelines for GB-scale MRI datasets (NIfTI formats), including skull stripping and normalisation for reproducible training.
- Integrated EfficientNet-B0 classification and Attention U-Net segmentation, achieving 95%+ Dice Score with interpretable outputs including 2D area, 3D volume, surface area, and sphericity metrics.
- Delivered an interactive React frontend with 3D tumour visualisation, brightness/contrast controls, user authentication, and downloadable PDF/HTML reports.

AI Job Market Analysis (2025–2026) | GitHub

- Conducted exploratory data analysis on 1,500 AI job listings across 14 countries, examining salary trends, in-demand skills, remote work patterns, and the emerging LLM job market.
- Engineered features and parsed multi-skill columns to produce 16 statistical visualisations including salary distributions, demand-vs-salary scatter plots, and LLM-vs-non-LLM skill comparisons.
- Identified key insights: Python appears in 62.8% of listings; ML Operations is the fastest-growing category (55.4% YoY); LLM roles command a salary premium ($191k vs $180k median).

- Built a reproducible Jupyter notebook pipeline using pandas, matplotlib, seaborn, and NumPy with clear documentation and requirements.

Bank Customer Churn Analysis — European Market (Tableau Dashboard) | GitHub | Live Dashboard

- Built an interactive Tableau dashboard analysing churn patterns across 10,000 European bank customers (France, Germany, Spain), identifying a 20.4% overall churn rate.
- Uncovered key risk segments: Germany at 32.4% churn (2x France/Spain), ages 46–55 at 50.6% churn, and female customers at 25.1% vs 16.5% for males.
- Identified a product sweet spot (2 products = 7.6% churn) and an overselling risk (3–4 products = 83–100% churn), leading to actionable retention recommendations.
- Designed 6 interactive, cross-filtering panels covering KPIs, geography, demographics, product holdings, and activity status for stakeholder-ready reporting.

Outfit Selection using Computer Vision | GitHub

- Designed a CNN-based fashion classification pipeline using Keras and OpenCV, achieving 85% accuracy across 10,000+ samples.
- Integrated external weather API signals to simulate context-aware recommendation logic and real-time decisioning.
- Built modular backend APIs and a lightweight dashboard for interactive inference and output delivery.