Rohan Shaileshkumar Mahajan

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Education

The University of Texas at Dallas *Expected May 2027*
M.S., Business Analytics and Artificial Intelligence
Vishwakarma Institute of Technology, India *May 2024*
B.Tech, Electronics and Telecommunication Engineering

Experience

Travticket Services Pvt.Ltd – *Developer Trainee* *Jun 2024 – Jun 2025*

- Designed and maintained scalable, secure data systems processing 10K+ patient records; integrated supervised ML models achieving real-time disease prediction with improved diagnostic accuracy
- Optimized healthcare analytics platform performance by 30%, ensuring efficient and accurate disease prediction model outputs across 3+ clinical modules
- Built 5+ responsive UI components to display real-time prediction results and personalized medicine recommendations in a user-friendly interface
- Implemented ML algorithms for real-time disease analysis tailored to individual patient history, reducing manual review time by 40%

Projects

Brain Tumor Detection and Classification | *Python, R, Regression, LDV Models* *Jan 2024 – May 2024*

- Built brain tumor detection system on 7,023 MRI images using HOG feature extraction and PCA, reducing 15,000+ features to 100 for efficient classification
- Benchmarked 5 ML classifiers with 5-fold cross-validation; XGBoost achieved 92.02% accuracy, 92.07% precision, and 91.85% F1-score, beating baseline models by 24+ points

Generative AI Business Application | *Python, LLMs, RAG, Prompt Engineering, Google Colab* *Sep 2025 – Dec 2025*

- Built 4 end-to-end AI pipelines in Python: LLM-powered chatbot with RAG, recommendation engine, GenAI code generator, and a genetic algorithm optimizer
- Designed a 2-phase industry AI app prototype with solution architecture, ROI analysis, and responsible AI governance framework; presented to a class of 60 students

Conagra Hackathon – Predictive Analytics | *Python, R, Regression, LDV Models* *Feb 2026 – May 2026*

- Built 5+ predictive models (regression, discrete choice, conjoint analysis, TOBIT, panel data) on a real Conagra industry dataset across a 15-week competition
- Delivered a 2-phase consulting report with cleaned dataset, reproducible code, and data-driven business strategies ranked competitively among 10+ peer groups

Hospital Readmission Prediction – CMS Medicare Data | *Python, Pandas, Tableau* *Feb 2026 – May 2026*

- Analyzed 100K+ CMS Medicare claims records using logistic regression and random forest to identify top 5 drivers of 30-day hospital readmissions with 85%+ model accuracy
- Built an interactive Tableau dashboard visualizing readmission rates across 3 dimensions (diagnosis, age group, region); surfaced 3 actionable cost reduction strategies

Skills

Programming & Analytics: Python, R, SQL, PL/SQL, MongoDB, SAS, C, C++
AI & Machine Learning: Supervised/Unsupervised Learning, Deep Learning, LLMs, Generative AI, RAG, Prompt Engineering, XGBoost, Neural Networks, Logistic Regression, Decision Trees, Clustering
Platforms & Tools: Microsoft Azure, Snowflake, Google Colab, Google Vertex AI, Excel (Solver), Tableau, MySQL, NoSQL
Domain Knowledge: Healthcare Analytics, Business Intelligence, Healthcare Policy, AI Governance, Network Optimization

Certifications & Honors

IEEE Publications: ML-based Brain Tumor Detection using HOG Feature Descriptor | Computer Vision Based Floor Space Recognition System
AWS Certifications: AWS Skills Center AI Practitioner: Foundational – Training Badge | AWS Skills Center Cloud Practitioner: Foundations – Training Badge