

Aditya Varma G

(313)752-6583 | adityaganapathiraju@gmail.com | [portfolio](#) | Ready to relocate to anywhere in USA

Summary — Data-driven professional with over **5 years** of experience across data science, data engineering, data analysis, and software development roles. Expertise in building **ETL pipelines**, deploying scalable machine learning models, and delivering actionable insights through data visualization. Proficient in **Python, SQL**, cloud platforms (**AWS, Azure**), and big data technologies (**Apache Spark**). Skilled in MLOps workflows (**CI/CD**), query optimization, and data integration. Adept at bridging technical and business needs to optimize decision-making processes and drive operational efficiency.

Education

Wayne State University

Master of Science in Data Science and Business Analytics (GPA 3.93)

Detroit, MI

Dec 2024

Birla Institute of Technology and science

Master of Science in software Engineering

Pilani, INDIA

Dec 2023

Experience

General Motors

Detroit, MI

Led the development and deployment of a customer targeting engine using demographic, vehicle, and online activity data, improving audience performance and media activation strategies across global markets.

Data Science Intern

May 2024 – Aug 2024

- Deployed scalable machine learning models (e.g., XGBoost, Random Forest, Neural Networks) with a 98% accuracy rate in Azure Databricks, ensuring seamless integration with business operations
- Optimized SQL queries and ETL pipelines, reducing data processing time by 40% and managing 50TB+ of customer data efficiently
- Conducted exploratory data analysis (EDA) on 50TB+ datasets, uncovering actionable insights to enhance marketing strategies

Infosys

Chennai, INDIA

Spearheaded a team to deliver data-driven solutions that improved transaction analysis and operational efficiency for financial services, enhancing decision-making for international stakeholders through predictive models and interactive visualizations.

Technology Analyst— Natwest Banking

May 2022 – Aug 2023

- Developed predictive models for transaction pattern detection with a 92% accuracy rate, using Python and Jupyter Notebooks
- Optimized Hadoop-based transaction data pipelines, increasing data processing efficiency by 50% to support real-time analytics at scale
- Designed large-scale ETL pipelines, improving transaction processing efficiency by 40%

Tata Consultancy Services

Mumbai, INDIA

Promoted twice within three years at TCS for consistently delivering high-impact solutions and exceeding performance expectations. Played a key role in implementing scalable machine learning and risk assessment solutions for financial clients, delivering impactful business insights

System Engineer — Client Risk Assessment Division

Feb 2020 – May 2022

- Built machine learning models for client risk assessment, utilizing Python and AWS services, achieving an 83% accuracy rate, improving real-time risk detection for international clients
- Designed and deployed scalable ETL pipelines using Apache Spark, reducing processing time by 25% and optimizing workflows for 50M+ daily transactions
- Developed interactive Power BI dashboards, reducing reporting time by 75% for nine high-profile client companies

Associate System Engineer — Admin Division

Nov 2018 – Feb 2020

- Developed Automated 3 Tableau reports with advanced visualizations, enhancing client satisfaction metrics by 100% through improved decision-making tools
- Optimized 12 database operations using complex SQL techniques, reducing processing time by 20% and improving system efficiency
- Designed and optimized complex SQL queries to support trading analytics, improving data retrieval efficiency by 30%

Projects

Fraudulent Transaction Identification Using AI

Mar 2024 - May 2024

- Developed and deployed an AI-powered fraud detection system using supervised learning and anomaly detection techniques
- Implemented multiple classification algorithms (e.g., XGBoost, Random Forest, Logistic Regression) to identify fraudulent transactions in large-scale financial datasets
- Optimized the XGBoost model using GridSearchCV and early stopping, achieving a 95% accuracy score and minimizing false positives

Wayne State Mental Health Chatbot Using NLP

Oct 2024 - Dec 2024

- Built a mental health chatbot using LLaMA and transfer learning with TensorFlow and Keras for natural language understanding and response generation
- Fine-tuned the model on Hugging Face mental health datasets, achieving ROUGE-1: 71% and BLEU: 69%
- Enhanced user interaction with advanced NLP techniques, including attention mechanisms and sequence-to-sequence architecture

COVID-19 Radiography Image Detection Model Using Computer Vision

Mar 2023 - Apr 2023

- Developed and evaluated deep learning models (EfficientNet B5, InceptionV3, MobileNetV3, and VGG19) to classify chest X-rays into COVID-19, Non-COVID, and Normal categories, achieving 97% precision for COVID detection with EfficientNet B5.
- Optimized model performance through data augmentation, transfer learning, and hyperparameter tuning, ensuring robust diagnostics with minimal false negatives.
- Visualized predictions using Grad-CAM to highlight critical regions in X-rays, aiding interpretability and decision-making for healthcare professionals

Chronic Disease Analysis in the USA

Oct 2023 - Dec 2023

- Conducted exploratory data analysis (EDA) using Plotly-Dash and Tableau to identify trends in chronic disease prevalence across the USA.
- Developed three regression models in Python to predict youth alcohol consumption rates, achieving an R-squared value of 0.94.
- Delivered insights through interactive dashboards and statistical models, aiding public health strategy formulation

Skills

Programming Languages: Python, SQL (Oracle SQL, MS-SQL), R, VB.net, Angular

Software Engineering & Product Delivery:

- Architecture & Deployment: Microservices Architecture, CI/CD Pipelines, API Integration, Scalability, Cloud-based Product Deployment
- Project Management: Agile Development, Risk Mitigation, Quality Assurance, Client Engagement
- MLOps: MLFlow, Jenkins, GitHub Actions

Data Science & Machine Learning:

- Model Development: Supervised & Unsupervised Learning, Deep Learning, Neural Networks, NLP, A/B Testing
- Data Processing & Integration: Feature Engineering, Data Imbalance Handling, Customer Segmentation, Predictive Analytics

Data Engineering: ETL Pipelines, Data Integration, Data Warehousing (Snowflake), Query Optimization, Database Management

Big Data & Cloud Technologies:

- Cloud Platforms: AWS (Lambda, EC2, VPC, CloudWatch), Azure Databricks
- Big Data Tools: Apache Spark, Hadoop

Database Operations: Advanced SQL (CTEs, Window Functions), Query Optimization

Business Intelligence: Tableau, Power BI, Google Analytics, Looker

Collaboration Tools: Confluence, Jira, Microsoft PowerPoint, Technical Documentation

Soft Skills: Strong Stakeholder Communication, Critical Thinking, Adaptability, Attention to Detail

Recognitions & Interests

Recognitions: TCS Employee of The Month (recognized for 4 months), TCS Outstanding Contributor (recognized by high-value client), 5TH Place in Waynehacks3(Hackathon conducted by Wayne State University)

Interests: Machine Learning Research, Data-Driven Strategy Development, Advanced Data Visualization