

Jerry Vishal Joseph Arockiasamy

Fairfax, VA | +1-571-774-0022 | jjosepha@gmu.edu | <https://linkedin.com/in/jerryvishal>

Education

George Mason University

Master of Science, Data Analytics Engineering (GPA: 3.82)

- **Coursework:** Machine Learning, Big Data Analytics, Statistical Methods, Data Mining

Aug 2023 - May 2025

Loyola ICAM College of Engineering and Technology

Bachelor of Engineering, Electronics and Communication

Aug 2017 - May 2021

Skills

- **Technical & Data Analysis:** SQL, Python, Fraud Detection, Anomaly Detection, Data Quality Monitoring, Statistical Methods
- **Business Intelligence & Tools:** Tableau, PowerBI, Figma (Dashboard Design), ArcGIS (Spatial Analytics), Business Intelligence Tools
- **Big Data & Cloud:** Databricks, AWS, Azure
- **Machine Learning & Feature Engineering:** Scikit-learn, Pandas, NumPy, Trend Identification, Summary Statistics, ML Modelling
- **DevOps & CI/CD:** Git, Jenkins, Terraform, Kubernetes, Docker, AWS CodePipeline, Azure DevOps, Monitoring (Prometheus, Grafana)

Experience

Mentored Minds | Data Analytics Intern

Jan 2023 - May 2023

- Led end-to-end **ETL pipeline** development, defining project scope, deliverables, and timelines. Coordinated with cross-functional teams to align workflows with business goals, reducing project completion time by 20%.
- Automated monthly sales report generation by developing a **Python** script, saving 8 hours per week, and enabling the sales team to focus on upselling opportunities, not reporting.
- Led data quality initiatives that uncovered and resolved three major data integrity issues, eliminating reporting discrepancies across 10,000+ records and strengthening executive **decision-making**.

Tata Group | Data Visualization Specialist Intern

Jul 2022 - Nov 2022

- Transformed 5+ datasets (sales, inventory, demand forecasting), improving data quality by 40% and reducing processing time by 15%.
- Developed **Power BI** dashboards with custom **DAX** measures to track KPIs like order fulfillment, inventory turnover and delivery efficiency.
- Enabled stakeholders to identify bottlenecks, boosting operational efficiency by 25% and enhancing safety prioritization for high-risk logistics.

Amazon | Transaction Risk Analyst

Dec 2021 - Jun 2022

- Conducted in-depth investigations by **analyzing reports and transactional data**, identifying irregular patterns, and implementing **data-driven solutions** to mitigate risk and enhance operational efficiency.
- Analyzed large datasets to identify **fraud patterns and anomalies**, improving reporting accuracy by 20% and reducing fraudulent transactions using **Python-based validation checks and SQL** queries.
- Ensured data accuracy by validating new and existing tools, performing **data audits**, and implementing cleansing processes, which improved data integrity and streamlined reporting workflows.
- Synthesized insights from 2,000+ customer interactions and transactional data points weekly, directly shaping key risk management strategies and improving **fraud detection** rates by 15% quarter-over-quarter.

Projects

Real-Time E-commerce Transaction Data Streaming and Processing Using Modern ETL Tools

Feb2025 – March 2025

- Engineered a real-time **ETL pipeline** using **Apache Airflow**, **PostgreSQL**, and **AWS Lambda** to process synthetic e-commerce data, detect fraud, and trigger alerts via **Amazon SNS**.
- Exported transformed data to Amazon S3 and built interactive dashboards in **Amazon Redshift** and **QuickSight** for monitoring fraud trends and sales performance.
- Containerized the pipeline using **Docker** and integrated **AWS services** to create a scalable, modular, and production-ready **BI workflow**.

Amping Up Insights: Electric Utility Rate Trends

Dec 2024 - Dec 2024

- Implemented K-Means clustering models to identify cost-effective utility providers and reveal significant rate trends across industrial, commercial, and residential sectors and developed predictive models using **ML models** to pinpoint revenue drivers
- Leveraged SQL and **Tableau** to detect billing anomalies across 10,000+ utility records, identifying cost-saving opportunities for clients.

Sentiment Analysis in Customer Reviews

Apr 2024 - Apr 2024

- Probed data integrity gaps using **AWS Glue DataBrew** on transaction datasets, targeting key risk indicators and anomalies, which improved detection rates by 25% and reduced false positives by 15%.
- Performed sentiment analysis and topic modeling on large-scale review datasets using **PySpark** in Databricks, utilizing NLTK packages, VADER lexicon, and LDA (Latent Dirichlet Allocation) to uncover actionable insights.

Certifications

- **Professional Certificate on Google Data Analytics:** 2022
- **Hands-on Project: Data Visualization for Business Insights:** 2022
- **Learning Excel: Data Analysis:** 2022