Akash Shanmuganathan

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Skills

Programming Languages: SQL (MySQL, PostgreSQL), Python, Java
Tools & Frameworks: Excel (Advanced Functions, Macros), Tableau, pandas, Streamlit, matplotlib
Platforms & Infrastructure: Jenkins, Git, Docker, Vercel, Render
AI/ML Techniques: SHAP, LightGBM, Explainable AI, Pandera
Domain Knowledge: Fintech Analytics, HR Analytics, Public Health Reporting, Risk Scoring

Experience

Hexaware Technologies   Chennai, TN, India
Software Engineer   Jun 2022 – Jul 2023
- Reduced SQL latency by 35% by optimizing 10+ stored procedures in MySQL for equity index computations, enabling faster access to stock market data.
- Built Tableau dashboards and JIRA integrations to track QA metrics, improving defect resolution insights and release visibility by 30%.
- Led backend QA for 15+ APIs using SQL validation and Postman, achieving 99% data consistency across regulatory fintech workflows.
- Created reusable Jenkins-integrated automation for nightly regression, ensuring early-stage defect detection and sprint velocity improvement.

Hexaware Technologies   Chennai, TN, India
Associate Software Engineer   Jan 2021 – May 2022
- Developed backend modules with MySQL for HR platforms, reducing manual errors by 40% using CRUD-based Java REST APIs.
- Conducted SQL-driven API validations for fintech workflows, improving data accuracy across investment systems.
- Created dashboards in Angular and Excel exports, enhancing internal operations reporting for 1,000+ users.
- Automated regression tests and improved test cycle efficiency by 50% using Rest Assured and structured MySQL validations.

Neo Technologies   Chennai, India
Data Analyst Intern   Jul 2020 – Dec 2020
- Automated data QA pipelines using Python and pandas, improving data integrity for public health dashboards by 30%.
- Developed anomaly detection and schema validation scripts for multi-source datasets, streamlining pre-ML ingestion checks.
- Collaborated on SQL-based ETL validation of 10K+ records/day, ensuring reliable input for downstream analytics and modeling.

Projects

HR Analytics Dashboard – Workforce Intelligence System - *Tableau, MySQL, pandas, Excel*
- Built a real-time Tableau dashboard using MySQL and Python to visualize attrition, performance, and salary trends; reduced manual reporting by 60%.

Motor Vehicle Crash Analytics – Predictive Safety Dashboard - *Python, SQL, Tableau*
- Analyzed 100K+ crash records using Python and SQL, building Tableau dashboards for city planners; improved hotspot prediction accuracy by 30%.

Data Validation Engine for ML Pipelines - *Python, Pandera, Streamlit, pandas, modular OOP*
- Engineered a modular pipeline for data quality checks including schema validation, rule enforcement, and drift detection. Visualized validation failures and drift metrics via Streamlit.

Education

Northeastern University, Boston, MA   Sep 2023 – May 2025
Master of Science in Engineering Management

Anna University, Chennai, India   Jun 2017 – Apr 2021
Bachelor of Engineering in Electrical and Electronics Engineering