

LakshmiPathiraju Pericharla

Data Scientist – Financial Analytics and Business Assurance

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PROFESSIONAL SUMMARY

- Data Scientist with 3+ years of experience applying statistical modeling, anomaly detection, and machine learning to mitigate financial risk, improve process efficiency, and support audit compliance.
- Expert in SQL, Python, and Spark for large-scale data discovery, transformation, and validation across financial and healthcare domains.
- Skilled in building ETL pipelines, proof-of-concept analytics, and executive dashboards using Databricks, Snowflake, Tableau, and AWS Glue.
- Strong foundation in business problem framing, data storytelling, and program performance metrics for Finance and Compliance partners.
- Passionate about leveraging data science for fraud detection, business optimization, and strategic decision-making across complex enterprise systems.

PROFESSIONAL EXPERIENCE

Data Scientist – Financial & Compliance Analytics

UnitedHealth Group, CA, USA

Jul 2024 - Present

- Partnered with Business Assurance and Finance teams to analyze payment patterns and detect anomalies, identifying \$1.2M+ in recoverable claim overpayments.
- Developed statistical and ML-based fraud detection models using Python (Scikit-learn, Pandas) and SQL, increasing accuracy of anomaly detection by 25%.
- Built Databricks-based pipelines for real-time transaction validation and reconciliation across multiple data sources (>3 TB).
- Created Tableau dashboards visualizing financial KPIs, audit exceptions, and BAC risk indicators, used by leadership for compliance oversight.
- Performed exploratory data analysis (EDA) to uncover process inefficiencies, enabling policy refinements that improved operational accuracy.
- Designed data documentation templates and data-quality standards to align business definitions with functional specifications.
- Presented analytic results to cross-functional leadership, articulating insights in both technical and financial terms for business decisions.

Data Scientist – Business Risk & Process Optimization

Brane Enterprises, India

Jan 2021 - Dec 2022

- Developed predictive models in Python and R for identifying fraudulent or high-risk financial transactions using transaction frequency, location, and behavioral data.
- Engineered ETL workflows in SQL, Spark, and Airflow to aggregate and cleanse financial and compliance data for advanced analytics.
- Built Tableau and Power BI dashboards summarizing fraud metrics, loss events, and process KPIs for internal audit teams.
- Partnered with auditors and engineers to translate business logic into data rules and statistical validation checks for automation.
- Automated reconciliation scripts in Python and SQL between Snowflake and MySQL, reducing audit cycle time by 40%.
- Documented feature logic, data lineage, and analytic assumptions for traceability and compliance with financial audit standards.

- Collaborated with product managers and compliance leads to define analytic requirements, performance metrics, and data validation goals.

PROJECTS

- **Monetary Loss Mitigation Engine– UHG**

Developed a hybrid SQL + Python pipeline in Databricks for anomaly detection and claims reconciliation, reducing monthly overpayment exposure by 32%.

- **Fraud Detection & Pattern Analysis – Brane**

Trained classification models (Logistic Regression, XGBoost) to identify suspicious transactions; implemented visual monitoring dashboards for Finance Compliance.

TECHNICAL SKILLS

- **Languages:** Python (Pandas, NumPy, Scikit-learn, PySpark), SQL (T-SQL, HiveQL), R (for statistical testing), Java
- **Big Data & ETL:** Databricks, Spark, Airflow, AWS Glue, SSIS
- **Visualization & Reporting:** Tableau, Power BI, Matplotlib, Seaborn
- **Databases:** Snowflake, SQL Server, PostgreSQL, Oracle, MySQL
- **Cloud & Tools:** AWS (S3, Lambda, Redshift), GitLab CI/CD, Docker, Jenkins
- **Core Expertise:** Statistical Modeling, Fraud Detection, Predictive Analytics, Data Governance, Business Process Optimization, Storytelling with Data

CORE COMPETENCIES

Data Science, Financial Risk Analysis, Business Assurance, ETL Automation, Fraud Detection, Stakeholder Communication

CERTIFICATIONS

- **Microsoft Certified: Power BI Data Analyst Associate**
- **AWS Certified Data Analytics – Specialty (Expected Dec 2025)**
- **Microsoft Certified: Azure Database Administrator Associate**

EDUCATION

Master of Science in Information Technology

Clark University, Worcester, MA

Bachelor of Technology

JNTUK, Visakhapatnam, Andhra Pradesh