Lubna Shaikh

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PROFESSIONAL SUMMARY

Data Professional with 3 years of experience, including 2 years in the Fintech sector managing high-volume transaction data and 1 year of data engineering in Healthcare. Expertise in Mule detection, anti-money laundering (AML) systems, and graph-based analytics. Skilled in leveraging advanced algorithms, GPU-optimized tools, and network analysis for scalable solutions. Passionate about fostering innovation, collaborating with cross-functional teams, and delivering results that drive growth, efficiency, and profitability for organizations.

WORK EXPERIENCE

NATIONAL PAYMENTS CORPORATION OF INDIA - NPCI | Data Scientist Mumbai, MH | Jan 2023 – Present

- **Mule Detection for UPI & IMPS**: Designed and deployed scalable, graph-based detection systems using cuGraph, Louvain partitioning, and multi-hop network analysis, time series modeling, leading to $12M in savings.
- **Cyclic Money Laundering Detection**: Constructed a transaction graph model utilizing NetworkX to identify cyclic behaviors. Applied network metrics like Gini index, reciprocal ratio, and small-world index to isolate high-risk clusters resulting in 92% model precision.
- **IMPS Fraud Analysis**: Developed interactive dashboards in Tableau to monitor and visualize real-time transaction data, enabling rapid identification and investigation of potential fraudulent activities using Pyspark
- **Community Detection**: Enhanced mule identification through network metrics such as density, clustering coefficient, and degree assortativity obtaining 70% model precision and 5x scalability.
- **Automated Detection & GPU Optimization**: Integrated CUDA and cuGraph to automate workflows, cutting manual efforts by 90% and boosting GPU efficiency by 70%.

DATAMETICA | Data Engineering Intern Pune, MH | Sep 2021 – Oct 2022

- Conducted skeleton testing of Directed Acyclic Graphs (DAGs) for orchestrating and triggering cloud functions upon file verification, significantly optimizing query performance to reduce costs.
- Engineered and deployed 10+ stored procedures in BigQuery, resulting in a streamlined data processing framework that reduced average query execution time by approximately 40%, enhancing overall project efficiency.

SKILLS

Languages: C++, Bash, SQL, Python
Database: BigQuery,PostgreSQL, MS SQL, Hive, MinIo and Trino , HQL
Data Science: NumPy, CuPy, Pandas, Exploratory Data Analysis, cuDf, scikit-learn, Logistic Regression, Pyspark Clustering, Statistical Modeling, Tableau (Basic), Statistical Programming, Predictive Modeling
Graph Analytics: NetworkX, cuGraph, Neo4j, ArangoDB, PyTorch Geometric, Cypher-Query, Kubeflow Pipelines, Graph ML
Technology: Airflow, BigQuery, IBM Datastage, Jupyter, Trino Superset, Kubeflow, Excel

EDUCATION

Bachelor of Engineering in Information Technology Aug 2022 | CGPA : 8.53
Savitribai Phule Pune University

ACHIEVEMENT

Ranked Third In the IT Department throughout Engineering
Rising Star Award by Datametica Solutions Pvt Ltd
Patent in process Ongoing patent for a Cyclic Pattern Money Laundering Detection System, under internal review.
Collaboration with Banks Partnered with various banks, delivering workshops to support their adoption of graph-based AML solutions.