DEBANJAN DEY

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SUMMARY

Senior Data Analyst with 5+ years' expertise in data analysis, risk management, and automation across healthcare and finance. Experienced in ETL processes using tools like SQL and Python, and visualization with Qlik and Tableau. Former Financial Crime Risk Analyst at HSBC, building data-driven solutions to mitigate financial crime. Currently at Phreesia Healthcare, optimizing patient check-ins through analytics and automation. Skilled in machine learning for compliance, pattern detection, and fraud prevention. AI enthusiast with hands-on experience using LLM APIs, prompt engineering, AI tools, agents, and Retrieval-Augmented Generation (RAG) systems.

WORK EXPERIENCE

Senior Data Analyst @Phreesia   **Jun 2024 – Present**

- Built a UI-driven automation tool that generates customized Business Review decks for 4000+ clients, auto-fetching data from Qlik and Excel to populate PowerPoint slides — saving **3 FTEs** through full-cycle reporting automation.
- Developed a **Streamlit**-based chatbot using **Groq API**, enabling internal stakeholders to query and interact with Confluence documentation in real time, reducing follow-up queries and saving an estimated **20+ hours per month** in manual support.
- Built a Python-based tool for the Life Sciences team that integrates with **Snowflake** to run queries, extract survey campaign data, and auto-generate custom PowerPoint decks using predefined templates, saving approximately **1.4 FTEs annually**.

Senior Data Analyst @HSBC   **Nov 2022 – Jun 2024**

- Developed an in-house UI tool for SWIFT MT/ ISO 20022 test file generation, automated alert reconciliation for model monitoring of the transaction screening tool. It replaced a third-party tool, yielding an annual cost saving of ~**$1 million**.
- Implemented a post detection layer for payments screening tool, resulting in up to a **7% reduction** in false positive alert volume. It uses text matching on fuzzy logic Levenshtein distance, risk score assignment through **K-means clustering** for identifying low-risk patterns to create whitelists for payment filter.
- Developed a machine learning model as an add-on to the post-detection layer for name screening engine that reduced the false positive alert volume by **20-35%** before feeding into the alert discounting engine.
- Conducted comprehensive model monitoring of screening tool for HSBC Germany, thus identifying model errors and suggesting corrective actions in line with OFAC, EU and UN **sanction** policies.

Data Analyst @HSBC   **Aug 2020 – Oct 2022**

- Built a Python tool to validate regulatory list updates across regions, automating reconciliation and reducing manual effort by 80%, saving **2 FTEs** in model monitoring.
- Catered to ad-hoc queries for alert data extraction from Customer and Payments **Data Lake** using **Hive SQL**, development and maintenance of alert dashboards in Tableau and Qlik Sense.
- Automated periodic validation of the name screening engine using exact and fuzzy matches of sanctioned entities, AML, and PEPs from World-Check, plus alert reconciliation, reducing risk and ensuring regulatory-compliant model effectiveness..
- Led the end-to-end testing and optimization of a Real-Time Screening tool for customer onboarding, **reducing onboarding time by 75%** through refined match rule logic.

EDUCATION

Degree/Program	Institution	Graduation Year	CGPA/Percentage
M.Tech in Power Systems	IIT Delhi, New Delhi	2020	8.67/10
B.Tech in EEE	NIT Calicut, Kerala	2017	8.41/10
Class XII	Ramkrishna Mission Vidyalaya, Viveknagar, Tripura	2013	93.6%
Class X	Ramkrishna Mission Vidyalaya, Viveknagar, Tripura	2011	10/10

TECHNICAL SKILLS

AI/ML: Recommendation Systems, Statistical Modelling, Keras, NLP, LLM APIs (OpenAI, Groq, Huggingface), AI Agents, RAG
Data Tools: Python, SQL, Apache Hive, Big Data, Snowflake, Streamlit, BigQuery, ETL Pipelines, MongoDB, Tableau, Qlik Sense
Dev & Collaboration Tools: HTML, CSS, Javascript, Git, JIRA, Confluence
Testing & QA: QA Testing, Hypothesis Testing, A/B Testing
Financial Crime Risk: Alert Investigation, Case Management, Sanctions (AML/CTF/PEPs), Name Screening, Transaction Screening

CERTIFICATIONS

Lean Six Sigma Yellow Belt - Catalyst Consulting [Credential ID: 88613829]

Supervised Machine Learning: Regression and Classification - Stanford Online [Credential ID: FTWY79DQL5AC]

Intro to Deep Learning & Neural Networks with Keras - Coursera [Credential ID: XC4W83JJEVXS]

Basic Recommender Systems - Coursera [Credential ID: C8TTN3RH6G68]