

N M EMRAN HUSSAIN

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SUMMARY

Data scientist with an MS in Business Analytics (George Washington University, School of Business). Experienced in building data pipelines, developing machine learning models, and bridging technical analytics with business strategy. Background in predictive modeling, statistical analysis, and extracting actionable insights from complex datasets.

TECHNICAL SKILLS

- **Programming & Core Libraries:** Python (Pandas, NumPy, Scikit-learn, TensorFlow, Matplotlib), SQL, R (Tidyverse, ggplot2)
- **Machine Learning & AI:** Generative AI & LLMs (RAG, Transformers), Deep Learning (TensorFlow/Keras, PyTorch), NLP (Word2Vec, FastText, Sentiment Analysis), Responsible AI (Fairness Metrics, SHAP)
- **Tools & Platforms:** Spark (PySpark), PostgreSQL, ETL Pipelines, Git/GitHub, GCP
- **Business Strategy Analytics:** A/B Testing, Customer Lifetime Value (CLV), Customer Acquisition Cost (CAC), AARRR Funnel, Churn Prediction, ROMI, ROI Analysis, Stakeholder Management.

PROFESSIONAL EXPERIENCE

Community Dreams Foundation (Volunteer) | Sebring, FL (Remote) | *Business Data Scientist* | Jul 2026 – Present

- Evaluated predictive modeling systems for an AI-driven drug repurposing (i.e. Covid-19) initiative that analyzes illness behavior and tests millions of 3D drug combinations.
- Analyzed the strategic business viability of candidates utilizing the FDA 505(b)(2) regulatory pathway, demonstrating a proposal of 70% to 90% reduction in development costs while nearly tripling clinical approval success rates to approximately 30%.

Ascend Technology Inc. | San Jose, CA | *Business Analyst Intern* | May 2025 – Aug 2025

- Improved SQL and Python KPI dashboards and translated business workflows into technical requirements alongside product teams.

Ampere Ltd. | Dhaka, Bangladesh | *Data Analyst* | Jan 2019 – Dec 2023

- Built Python time-series forecasting models, reducing inventory variance across core product lines.
- Developed Tableau dashboards enabling regional directors to monitor inventory replenishment.

Anrhus & Shuzos Co. | Dhaka, Bangladesh | *Assistant Manager (Operations & Logistics)* | Jun 2009 – Dec 2018

- Streamlined inventory analytics and localized data tracking workflows to support infrastructure operations and accelerate asset time-to-revenue.

APPLIED AI & PERSONAL RESEARCH PROJECTS

Cardiovascular Risk Assessment Assistant | github.com/nmemranhussain/cardio-triage-4-agents

Vertex AI, BigQuery ML, Vector Search (RAG), Multi-Agent Workflows, Streamlit, Docker, Cloud Run

- Developed an cloud-based solution utilizing a 4-agent workflow and prompt engineering to parse vitals and predict mortality with SHAP explainability.
- Engineered a RAG architecture for medical guideline retrieval, executing the development cycle to deploy a serverless, containerized application to GCP Cloud Run.

Clinical Risk & Readmission Analytics Model (Kaggle Healthcare Dataset) | github.com/nmemranhussain/DiaVigil

Python, DuckDB SQL, CatBoost, XGBoost, SHAP, Streamlit, Groq API, Multi-Agent Workflows

- Architected a 3-agent AI application to evaluate 30-day readmission risk across 101,700+ patient records, combining data analytics with rapid LLM orchestration.
- Automated SQL data extraction and predictive feature engineering, facilitating client presentations through interactive Plotly data visualizations.

Predictive-RAG Retention Engine | github.com/nmemranhussain/RAG-Retention

Gemini 2.5 Flash, Cloud Platforms (GCP), PySpark, ChromaDB, LangChain, RAG

- Engineered an AI architecture utilizing LinUCB Bandits and Reinforcement Learning to optimize complex decision support.
- Orchestrated a Retrieval-Augmented Generation (RAG) pipeline relying on Gemini 2.5 Flash Pro, LangChain, and ChromaDB.

EDUCATION

- **MS in Business Analytics** | The George Washington University, School of Business | Dec 2025
- **Master of Business Administration (Executive Program)** | North South University | May 2023
- **BSc in Electrical and Electronics Engineering (EEE)** | American International University-Bangladesh | Dec 2008