URMI SEN

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⭘ urmisen.github.io/portfolio/

Education

Rajshahi University of Engineering & Technology (RUET)	**2016 − 2021**
B.Sc. in Computer Science & Engineering	*Rajshahi,Bangladesh*

CGPA - 3.38 out of 4.00

Thesis

Convolutional Neural Network Based Approach for Prediction of Lysine Glutarylation Sites in Proteins.
Supervisors: Dr. Md. Al Mehedi Hasan & Dr. Md. Ali Hossain

Relevant Coursework

- Computer Fundamentals
- Discrete Mathematics
- Data Structures
- Numerical Method
- Algorithms Analysis
- Database Management
- Computer Networks
- Computer programming
- Object Oriented Programming
- Computer Architecture
- Data Mining
- Artificial Intelligence
- Neural Network and Fuzzy System

Standardized Test Scores

International English Language Testing System (IELTS) - 27th & 29th July, 2023

Overall Band Score	Listening	Reading	Writing	Speaking
7.0	8.5	7.0	6.5	6.5

Experience

Fintech Company (Pathao Pay Limited)	**Jan 2025 − Present**
Data Scientist	*Dhaka, Bangladesh*

- [Analytics & AI] Developed document indexing pipeline with Vertex AI embeddings for semantic search capabilities.
- [Analytics & AI] Built AI-powered chatbot leveraging RAG with Vertex AI Search for payment regulation inquiries.
- [Data Engineering] Built comprehensive DBT platform for financial data transformation with layered architecture.
- Provided data-driven insights to assist business stakeholders in decision-making.

Mahdy Research Academy	**August 2024 − April 2025**
Research Fellow	*Bangladesh*

- Developed expertise in quantum computing and machine learning through intensive research training program focused on quantum-classical hybrid models.
- Co-authored a research paper on a hybrid quantum-classical Siamese network under the guidance of Dr. Mahdy Rahman.

Logistics Company (Pathao Limited)	**Oct 2023 − Dec 2014**
Data Scientist	*Dhaka, Bangladesh*

- [Analytics] Developed and maintained interactive dashboards using Tableau for business metrics visualization.
- [Analytics & AI] Implemented geo-spatial analysis for zone creation and surge pricing optimization.
- [Analytics & AI] Applied ML algorithms (regression, clustering) to predict surge values and identify behavioral patterns.
- [Data Engineering] Refined ETL pipeline and developed user/driver feature store using DBT for personalized campaigns.
- [Statistics] Conducted experiments with A/B testing and cohort analysis to measure impact of driver incentives.
- [Analytics & Data Engineering] Contributed to adaptive fraud detection system for real-time pattern identification.
- Provided data-driven insights to assist business stakeholders in decision-making.

EdTech Company (Shikho Technologies)	**Feb 2023 − Sept 2023**
Data Scientist	*Dhaka, Bangladesh*

- [Analytics & AI] Developed statistical models for data-driven insights and business optimization.
- [Analytics & AI] Conducted cluster analysis on user base for operational execution.
- [Data Engineering] Created automated pipelines for campaign data extraction and storage.
- [Automation] Automated business tasks using Python with PostgreSQL and MySQL.
- [Analytics] Developed Facebook campaign analytics tool to measure audience perspective and brand quality.
- [Analytics] Integrated multiple data sources into Tableau for stakeholder visualization.
- Provided data-driven insights to assist business stakeholders in decision-making.

EdTech Company (Shikho Technologies)   June 2022 – Jan 2023
Data Analyst   *Dhaka, Bangladesh*
- Extracted, cleansed, and analyzed data from PostgreSQL and MySQL databases.
- [Analytics] Created reports with visualizations, analyzed performance issues, and provided actionable insights.
- [Analytics] Developed dashboards for product performance and sales/revenue tracking with optimized PostgreSQL queries.
- Assisted sales force with AI and BI-based analysis for decision-making.

Machine Learning Research Group, RUET   August 2019 – April 2021
Undergraduate Research Fellow   *Rajshahi, Bangladesh*
- Acquired knowledge of machine learning and deep learning concepts and implementation techniques.
- Co-authored research paper under guidance of Dr. Md. Al Mehedi Hasan. (Link)

Skills & Interests

Research Domains :	Data Mining, Machine Learning, Deep Learning, Computer Vision, Bioinformatics, Geospatial Analysis, Statistical Experimentation
Programming Languages :	Python, C/C++, SQL, HTML, CSS
Technologies :	Google Cloud Platform, Vertex AI, DBT, FastAPI, Streamlit, RAG, MCP, FAISS, H3, Folium, Tensorflow
Databases :	PostgreSQL, BigQuery, MySql
Applications :	Jupyter Notebook, VS Code, Tableau, Metabase, GitHub, Google Docs, Drive, Sheets MS Excel, Looker Studio
Methodologies :	A/B Testing, Clustering, Data Warehousing, Document Indexing, Dynamic Pricing Models
Soft Skills :	Leadership, Communication, Teamwork, Project Management
Languages :	English: Full professional proficiency, Bengali: Full professional proficiency

Awards & Honors

- Technical scholarship holder granted by committee of Rajshahi University of Engineering & Technology, Bangladesh.
- Recognized by Shikho Technologies Bangladesh Limited leadership for being "an asset to the company every single day as a Data Scientist" and valued as a great colleague.
- Top 10 Team in Datathon 3.0 by Robi Axiata Limited, recognized for outstanding performance and innovative contribution.

Selected Projects Or Practices

Programming Fundamentals
- OOP & Data Structure. (Link)
- Basics of Python programming. (Link)
- Data manipulation and visualization with Python. (Link)
- SQL practice from online competitions (Leetcode). (Link)

Web Development Projects
- Lab Automation System - Computer configuration tracking and application inventory. (Link)
- Student-Faculty Management System - Django system for profile management and notifications. (Link)

Data Science & Machine Learning
- Exploratory Data Analysis - Dataset cleaning, preprocessing, and predictive modeling. (Link)
- ML Implementations - Course projects and The Sparks Foundation tasks. (Link)
- Sequence Classification - CNN model for protein sequences with class imbalance resolution. (Link)
- Medical Image Classification - Transfer learning with AlexNet, ResNet, Inception.

Data Analytics & Engineering Platforms
- Vertex AI Document Indexing - Semantic search pipeline with vector embeddings. (Link)
- Dynamic Pricing Analysis - Zone-based transportation pricing models. (Link)
- Experimental Design Framework - A/B testing for driver incentive mechanisms. (Link)
- FinTech DBT Platform - Financial data analytics with layered architecture. (Link)
- Geospatial Clustering - Ride-sharing data analysis with H3 hexagons. (Link)
- MCP Payment Chatbot - AI-powered regulatory chatbot with RAG and Vertex AI. (Link)

Publications

DeepGlut: A Deep Learning Framework for Prediction of Glutarylation Sites in Proteins
Status: Available Online — Conference: IEEE Region 10 Symposium — Publisher: IEEE — Field: Bioinformatics — DOI: 10.1109/TENSYMP50017.2020.9230866

QSiamNet: A Hybrid Quantum-Classical Siamese Network for Enhanced Similarity-Based Learning
Status: Under Review — Conference/Journal: Neurocomputing — Publisher: Elsevier — Field: Artificial Intelligence