Md Rakibul Hasan

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EDUCATION

New Jersey Institute of Technology (NJIT), USA
PhD in Computer Science, 05/2026 *(Expected)*, CGPA: 3.91/4.0
Institute of Business Administration (IBA), University of Dhaka, Bangladesh
Executive MBA, 2021, CGPA: 3.82/4.0 *(Valedictorian, Gold Medalist)*
Bangladesh University of Engineering and Technology (BUET), Bangladesh
BS in Electrical & Electronic Engineering, 2013

EXPERIENCE (5+ YEARS)

Graduate Teaching Assistant | NJIT, USA   **09/2021 - Present**
- o Taught Python, C++ & collaborated with professors to develop course materials, including lectures, programming assignments, and projects for *Data Structure & Algorithm, Computer Science II C++, and Database Design* courses.

Data Science Specialist | Business Strategy Planning Team | Robi Axiata Limited, Bangladesh   **09/2016 – 08/2021**
- o Wrangled over 12TB of network data stored in HDFS using Hive SQL, transforming raw datasets into structured formats to power interactive dashboards, which resulted in an 11% improvement in network KPIs including latency, throughput, and packet loss.
- o Responsible for leading monthly and quarterly performance reviews, analyzing data variances, and providing business strategies for corrective measures, which resulted in a 12% improvement in regional KPIs performance.
- o Boosted regional telecommunication revenue by optimizing predictive models (Prophet, Gradient Boosting, Random Forest) and developing an Automated Machine Learning (AML) tool, achieving acceptable RMSE thresholds.
- o Identified 7,000 high-potential sites for optimal LTE coverage in Bangladesh by developing and deploying a machine learning system with Clustering model, significantly enhancing network performance and customer satisfaction.
- o Prevented daily 8% 4G mobile data traffic loss by successfully forecasting user movement towards certain regions during the COVID-19 pandemic using LSTM and the Hidden Markov Model (HMM).
- o Built predictive models for geographic, demographic, and customer interest segmentation, improving regional campaign efficiency by 16% and increasing Binge platform sign-ups by 21% through personalized promotions and discounts.

Data Science Intern | Fujitsu Research Lab, Japan   **09/2019 – 12/2019**
- o Processed and analyzed digital marketing data using Community Detection algorithms and Ensemble methods, increasing customer ad engagement and conversion rates by 3.6%.
- o Accurately predicted a car manufacturer's monthly demand with a 95% confidence level by analyzing previous sales data, government data, and other related data using LSTM, SARIMA, Facebook Prophet, and Naive Bayes algorithms.
- o Analyzed POS data to identify purchasing trends and formulate strategies using Gradient Boosting, Eclat, and Apriori algorithms, increasing daily sales by 2.1% in convenience stores.
- o Optimized power usage by reducing peak demand 12% & improving forecast accuracy 18% using clustering to profile user types.

RELEVANT PUBLICATIONS

- o 'A Bayesian Reinforcement Learning Framework for Online Index Tuning' published at 'International Conference on Big Data Analytics and Knowledge Discovery (DaWaK 2025)'.
- o 'Scalable Optimization of Graph Pattern Queries Using Summary Graphs' published at 'International Conference on Web Information Systems Engineering (WISE 2025)'.
- o 'LiteSelect: A Lightweight Adaptive Learning Algorithm for Online Index Selection' published at 'International Conference on Big Data Analytics and Knowledge Discovery (DaWaK 2024)'.

ACADEMIC PROGRAMMING PROJECTS

- o **Ship Ship Delay Prediction:** Developed and deployed a machine learning model to predict delays for US Navy ships, enhancing the efficiency of scheduling and planning using Python and Scikit-learn.
- o **Collaborative Task Deployment:** Implemented deployment strategies for collaborative tasks on crowdsourcing platforms, adapting to dynamic workforce availability using Python.
- o **WALLET Payment Network:** Developed and deployed WALLET, a database system application like Venmo and Zelle, facilitating electronic money transfers between individuals using MySQL and Python.

SKILLS

Programming Languages: C/C++; Python; SQL. **Machine Learning Frameworks**: TensorFlow; PyTorch; Keras; Scikit-learn. **Data Science Tools**: Pandas; NumPy; Matplotlib; Tableau; Power BI; Excel VBA/Macro. **Data Analysis**: Data Preprocessing; Data Visualization; Statistical Modeling, A/B testing. **Cloud Computing**: AWS. **Database**: MySQL; PostgreSQL; MongoDB.