

A S M Shahadat Hossain

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SUMMARY

I have proven abilities to work under pressure where quick learning and ready-witted problem-solving capabilities are my driving forces. I have recently completed my master's degree in computer science. I also have a bachelor's degree in computer science and engineering. I have taught computer science undergraduate courses as a Teaching Assistant. Besides, my industry experience includes working in Information Technology domains for a few years. I have worked for leading telecommunication companies in Asia such as Robi Axiata Limited and Grameenphone Limited serving more than 49 million and 83 million subscribers respectively. With my considerable technical and interpersonal skills, I am always open to new challenges and newer opportunities. I am looking for opportunities to start a PhD in Computer Science.

EDUCATION

Northern Illinois University

M.S. in Computer Science

Thesis: Evaluating Computational Reproducibility of Jupyter Notebooks Using ML and NLP.

DeKalb, IL, USA

Aug 2024

Rajshahi University of Engineering & Technology

B.Sc. in Computer Science & Engineering

Thesis: Fake News Detection within a Static Dataset using Supervised Machine Learning Algorithms.

Rajshahi, Bangladesh

Feb 2018

RESEARCH INTERESTS

My research interests include but are not limited to:

- **Data Management:** Data Engineering, Computational Reproducibility, Data Management Systems.
- **Machine Learning:** Applied Machine Learning, Classification and Clustering methods.
- **Natural Language Processing:** Large Language Models, Sentiment Analysis, Information Retrieval.
- **Software Engineering:** Program Analysis, Applications of Artificial Intelligence in Software Engineering.

PUBLICATIONS

- **Hossain, ASM Shahadat.** "Customer Segmentation using Centroid Based and Density Based Clustering Algorithms." In *2017 3rd International Conference on Electrical Information and Communication Technology (EICT)*, pp. 1-6. IEEE, 2017. [Cited by: 43]

Work in progress:

"Evaluating Computational Reproducibility of Jupyter Notebooks Using ML and NLP."

WORK EXPERIENCE

Teaching Assistant (Computer Science)

Northern Illinois University

Aug 2020 - May 2024

DeKalb, IL, USA

Held office hours, graded weekly assignments, quizzes, final exams, and proctored exams for courses:

- CSCI 330: UNIX and Network Programming; Fall 2021, Fall 2022, Spring 2023, Fall 2023, Spring 2024.
- CSCI 463: Computer Architecture and Systems Organization; Spring 2022.
- CSCI 240: Computer Programming in C++; Fall 2020, Spring 2021.

Graduate Staff Assistant (Data Science & Business Intelligence)
Northern Illinois University

Jun 2022 - Sep 2022
DeKalb, IL, USA

- Generated occupations and skills-based suggestions for graduate students by applying Data Science on Labor Market Data supplied by Emsi Burning Glass and 18K course syllabus documents.
- Ran processes on a Hybrid CPU/GPU Computing Cluster having 60 nodes capable of 30 teraFLOPS.
- Detected and Corrected errors in 13 Python scripts caused due to System Migration (Windows to Linux).
- Performed Data Migration from flat files to Snowflake (Cloud Computing-based Data Warehouse).
- Generated Data Visualization using Microsoft Power BI for Graduate Career and Professional Development portal.

Specialist (Customer Insights Platform & Operational Support Systems)
Robi Axiata Limited

May 2019 - Feb 2021
Dhaka, Bangladesh

- Developed at least 10 scripts using Python, PL/SQL, Linux Shell, Windows PowerShell to automate manual jobs to save at least 4 man-hours per day that is approximately \$8K per year.
- Managed Oracle, MySQL, Microsoft SQL Server Database Systems.
- Provided Server Administration Assistance (Linux: Red Hat Linux, SUSE Linux, and Windows: 2012 R2, 2016).
- Initiated Telecom Network Change Request, Monitored and ensured Necessary Follow-up.
- Extended operational support in Agile and Scrum projects where more than 100 daily manual tasks were automated with a budget of more than \$1 million.
- Analyzed network performance data of approximately 50 million subscribers by using tools and scripts.
- Performed System Administration of Telecommunication (Transmission, Radio, and Core) Network Management Systems (NMS) and Customer Insights Platforms - 4 developed by Nokia, 6 developed by Huawei, and 2 developed by Ericsson.

Jr. Engineer (Business Intelligence & Data Warehouse)
Grameenphone IT (Wipro Bangladesh) Limited

Aug 2018 - May 2019
Dhaka, Bangladesh

- Performed Developments and Operations of daily ETL (Extract, Transform, Load).
- Investigated Data Trend Mismatch from a revenue of approximately \$40K per day.
- Generated monthly High Value customers' database from 83 million subscribers using PL/SQL.
- Integrated new processes in Oracle Data Integrator (ODI) at least 2 times a month.
- Monitored daily Operating System and Database performance of a cluster of 8 Linux servers.

Project Engineer (Transmission Optimization & Modernization)
Robi Axiata Limited

Apr 2018 - Jun 2018
Dhaka, Bangladesh

- Ensured daily implementation support in Project (Agile) Management and Vendor Management.
- Initiated and monitored at least 10 Network Change Requests initiation and execution per day for 3G to 4G network upgradation.

PROJECTS

- Evaluating Computational Reproducibility of Jupyter Notebooks Using ML and NLP.
- Reproducibility of Visualizations in Jupyter Notebooks: Algorithms vs Programmers.
- 'Reproducibility' in Computer Science Conferences.
- Weather Station using Raspberry Pi and Environmental Sensors.
- Clinical Trials Categorization using ML and NLP based on their Media Attention.
- Customer Segmentation using Centroid Based and Density Based Clustering Algorithms.
- Fake News Detection within a Static Dataset using Supervised Machine Learning Algorithms.

SKILLS

- **Data Analysis:** Machine Learning, and Natural Language Processing using Python libraries such as NumPy, Pandas, Scikit-learn, NLTK, Gensim, Matplotlib, Seaborn, OpenCV, SpaCy, SciPy, TensorFlow, PyTorch, and Keras.
- **Data Management:** Enterprise Data Warehousing, Business Intelligence Data Integration, ETL (Extract, Transform, Load) in Oracle, MySQL, and Microsoft SQL Servers.
- **Data Visualization:** Tableau, Microsoft Power BI, Microsoft Excel, and JavaScript D3.
- **Automation:** Tasks automation using Python, PL/SQL, JAVA, Bash, Windows PowerShell, and PHP.
- **System and Server Administration:** Red Hat Linux, SUSE Linux, and Windows.
- **Interpersonal Skills:** Leadership, teamwork, conflict management, patience, and communication.

SERVICE

- Student Program Committee:
 - 13th International Conference on the Theory of Information Retrieval with SIGIR (ICTIR), 2023.
- Reviewer:
 - The 4th International Conference on Electrical, Computer and Energy Technologies (ICECET), 2025.
 - The 4th International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), 2024.
 - The 3rd International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), 2023.
 - The 3rd International Conference on Electrical, Computer and Energy Technologies (ICECET), 2023.
 - International Conference on Artificial Intelligence, Control, Data Sciences and Applications (ACDSA), 2023.
- Judge, Conference on Undergraduate Research and Engagement (CURE), Northern Illinois University, 2024.
- Problem Setter and Judge, RUET Analytical Programming Lab (RAPL), 2015-2017.
- Other services:
 - Volunteer (Evaluation), STEM Fest sponsored by Meta and hosted by Northern Illinois University, 2023.
 - Volunteer (Evaluation), STEM Fest sponsored by Meta and hosted by Northern Illinois University, 2022.
 - Volunteer (MobilePack), Feed My Starving Children, 2021.
 - Volunteer (Laser Fountains & Holograms), STEM Fest sponsored by Facebook and hosted by Northern Illinois University, 2021.
 - Advisor, Tarunya Shakti - a Nonprofit Organization doing humanitarian works, 2020 - 2024.
 - Team Leader, RUET Abnormalz - a Competitive Programming team that participated in 8 National and several International Programming Contests. 2013 - 2017.
 - Secretary (Communication), RUET IT Society (RITS), 2017.
 - General Member (Communication), RUET Programmers' Association (RPA) & ACM Lab, 2014 - 2015.

CERTIFICATIONS

- **IBM AI Engineering Professional Certificate** for successfully completing the following 6 courses:
 - Machine Learning with Python.
 - Scalable Machine Learning on Big Data using Apache Spark.
 - Introduction to Deep Learning & Neural Networks with Keras.
 - Deep Neural Networks with PyTorch.
 - Building Deep Learning Models with TensorFlow.
 - AI Capstone Project with Deep Learning.
- **Machine Learning** - Certificate of completion of an 11-week course with Stanford Online.

AWARDS AND ACHIEVEMENTS

- Top 25 Employees: among 1400 employees at Robi Axiata Ltd, Bangladesh for AI Upskilling Program, 2020.
- Top 100 Learners: among 1400 employees at Robi Axiata Ltd, Bangladesh for times spent in online learning, 2020.
- Divisional Champion, National Collegiate Programming Contest (NCPC), Bangladesh, 2015.
- Honorable Mention, ACM ICPC Dhaka regional online preliminary, 2013, 2014, 2015, 2016.
- Honorable Mention, IEEE RoboTour & Programming Contest, RUET, Bangladesh, 2014.
- Honorable Mention, Divisional Math Olympiad (BdMO), Dinajpur, Bangladesh, 2010.
- Best Speaker, Hakimpur Upazila Debate Competition, Bangladesh, 2009, 2010.
- Winner, Hakimpur Upazila Inter School Essay Writing Competition, Bangladesh, 2004, 2010.
- Education Board Scholarships, Bangladesh, 2004, 2007, 2010, 2012.