



ADITI SAHA



CONTACT INFORMATION

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RESEARCH INTERESTS

Large Language Models, Data Science, Machine Learning, Quantum Computing, Time Series Forecasting

EDUCATION

Tuskegee University, Tuskegee, AL, USA [Expected August 2025]
M.Sc. in Information System and Computer Security, (Track - Data Science), CGPA 4.00/4.00
Computer Science Department, Tuskegee University, Tuskegee, AL 36088

American international University-Bangladesh (AIUB), Dhaka, Bangladesh [2017- 2021]
B.Sc. in Computer Science and Engineering, Magna Cum Laude CGPA 3.90/4.00

Pabna Government Women's College, Pabna, Bangladesh. [2015]
Higher Secondary Certificate (HSC) GPA: 5.00/5.00

THESIS

M.Sc. Thesis : Groundwater Level Prediction: Analyzing the Performance of LSTM and QLSTM Model [Proposed]

- Working on Integrated Groundwater Management, to develop Quantum Long short term Memory (QLSTM) and Long short term Memory (LSTM) based model for groundwater level forecasting

B.Sc. Thesis : Bengali Article Recommendation System based on Topic Similarity Using Latent Dirichlet Allocation. [Completed]

- Developed an LDA-based prediction and recommendation model for the Bengali language to enhance NLP applications for the Bengali-speaking community.

PUBLICATION

- **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Evaluating LSTM Time Series Prediction Performance on Benchmark CPUs and GPUs in Cloud Environments." In *Proceedings of the 2024 ACM Southeast Conference*, pp. 321-322. 2024.
- **Saha, Aditi**, Taieba Tasnim, Mohammad Rahman, and Fan Wu. "Groundwater Level Prediction: Analyzing the Performance of LSTM and QLSTM Model" Accepted in *2024 IEEE International Conference on Big Data workshop BPOD 2024* in Washington, D.C.
- **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Comparative LSTM and QLSTM Time Series Prediction Performance on Benchmark CPUs and GPUs on Cloud Environments Leveraging Groundwater Datasets" Accepted in *American Geophysical Union Conference 2024* in Washington, D.C.
- **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Evaluating LSTM Time Series Prediction Performance on Benchmark CPUs and GPUs on High Performance Computer Leveraging Groundwater Datasets" Accepted in *American Geophysical Union Conference 2024* in Washington, D.C.
- Taieba Tasnim, **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Comparison of CNN and QCNN Performance in Binary Classification of Breast Cancer Histopathological Images" Accepted in *2024 IEEE International Conference on Big Data workshop BPOD 2024* in Washington, D.C.
- Taieba Tasnim, **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Quantum Vs Classical: Performance Benchmarking of CNN and QCNN in Binary Image Classification" Accepted in *2025 IEEE 15th Annual Computing and Communication Workshop and Conference (CCWC)* in University of Nevada, Las Vegas.

PRESENTATIONS	<ul style="list-style-type: none"> • 62nd ACM Southeast Conference (ACMSE) 2024 conference in Marietta, Georgia April, 2024 • Integrated Groundwater Management (IGM) 2024 workshop, Tuscaloosa, AL June 2024 • Alabama Higher Education AI exchange conference, Auburn, AL October 2024 • American Geophysical Union Annual Meeting, Washington, D.C. December 2024 • IEEE International Conference on Big Data, Washington, D.C. December 2024
COURSES COMPLETED	<ul style="list-style-type: none"> • Data Networks & Cloud Computing • Database Systems • Information Security • Network Security Management • Data Analytics • Big Data Analytics • Data Mining & Machine Learning • Statistics With R
SKILLS	<ul style="list-style-type: none"> • Platform: Unix, Windows • Programming Language: Bash, C, C++, C#, Java, Assembly language, Python, MATLAB • Visualization and Data Analysis Tool: Tableau, Hadoop, Hive, Python, Office Excel • Database: SQL (MySQL), Oracle • Networking: Cisco Networking • Drawing and Design Tool: Proteus, NI Multisim, AutoCAD • Machine Learning: Weka • Documentation and Presentation Tool: L^AT_EX, Microsoft Office Suite
HONORS AND AWARDS	<ul style="list-style-type: none"> • Graduate Teaching and Research Assistant, Tuskegee University [Fall 2023 - present] • Magna Cum Laude (Silver Medal) for academic excellence at AIUB. • Dean's List Award, AIUB. [Spring 18-19, Fall 18-19] • Tuition Waiver in AIUB (For Outstanding Results) [2017-2021] • Government Merit Scholarship in Secondary School Certificate Examination [2013-2015] • Government Merit Scholarship in Junior Scholarship Examination [2010-2012]
MEMBERSHIP	<ul style="list-style-type: none"> • Member of Association for Computing Machinery • Member of American Geophysical Union • Member of Engineering Students' Association of Bangladesh (ESAB). • Member of IEEE Bangladesh Section.
WORK EXPERIENCE	<ul style="list-style-type: none"> • Graduate Teaching and Research Assistant [Fall 2023 - present] Department of Computer Science, Tuskegee University, Tuskegee, AL 36088 • Teaching Assistant [Fall 2020-2021] Department of Computer Science and Engineering, AIUB, Dhaka, Bangladesh.
REFERENCES	<ul style="list-style-type: none"> • Mohammad Rahman, Ph.D. [Advisor] Assistant Professor, Department of Computer Science, Tuskegee University • Wu Fan, Ph.D. Head & Professor, Department of Computer Science, Tuskegee University • Paramjit S. Kahai, Ph.D. Associate Professor, Department of Computer Science, Tuskegee University