ADITI SAHA

Contact Information
420 East Magnolia Avenue, Apt B201,
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Research Interests
Data Science, Machine Learning, Quantum Machine Learning, Large Language Models

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 Models [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. [Published]
• **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Groundwater Level Prediction: Analyzing the Performance of LSTM and QLSTM Model" in *2024 IEEE International Conference on Big Data workshop BPOD 2024* in Washington, D.C. [Accepted]
• **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" in *American Geophysical Union Conference 2024* in Washington, D.C. [Accepted]
• **Saha, Aditi**, Taieba Tasnim, Mohammad Rahman, and Fan Wu. "Advancing Time Series Forecasting: Quantum vs. Classical LSTM Approaches" in *2025 IEEE 15th Annual Computing and Communication Workshop and Conference (CCWC)* in University of Nevada, Las Vegas. [Accepted]
• Taieba Tasnim, **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Quantum Vs. Classical: Performance Benchmarking of CNN and QCNN in Binary Image Classification" in *2025 IEEE 15th Annual Computing and Communication Workshop and Conference (CCWC)* in University of Nevada, Las Vegas. [Accepted]

Presentations

• IEEE International Conference on Big Data, Washington, D.C. December 2024
• American Geophysical Union Annual Meeting, Washington, D.C. December 2024
• 62ndACM 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

COURSES COMPLETED	• Data Networks & Cloud Computing • Database Systems • Information Security • Network Security Management • Data Analytics • Big Data Analytics • Data Mining & Machine Learning • Statistics With R
SKILLS	• **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**: LaTeX, Microsoft Office Suite
HONORS AND AWARDS	• 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]
WORK EXPERIENCE	• 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.
MEMBERSHIP	• Member of Association for Computing Machinery • Member of American Geophysical Union • Member of Engineering Students' Association of Bangladesh (ESAB). • Member of IEEE Graduate Student Member
REFERENCES	• **Mohammand Rahman, Ph.D.** [Advisor] Assistant Professor, Department of Computer Science, Tuskegee University • **Wu Fan, Ph.D.** Head & Professor, Department of Computer Science, Tuskegee University • **Bhuyan, Jay, Ph.D.** Professor, Department of Computer Science, Tuskegee University