



# 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 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**, Taieba Tasnim, 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. "Comparative LSTM and QLSTM Time Series Prediction Performance on Benchmark CPUs and GPUs on Cloud Environments Leveraging Groundwater Datasets" in *American Geophysical Union Conference 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]
- Taieba Tasnim, **Saha, Aditi**, Mohammad Rahman, and Fan Wu. "Comparison of CNN and QCNN Performance in Binary Classification of Breast Cancer Histopathological Images" in *2024 IEEE International Conference on Big Data workshop BPOD 2024* in Washington, D.C. [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	<ul style="list-style-type: none"> <li>• 62<sup>nd</sup> ACM Southeast Conference (ACMSE) 2024 conference in Marietta, Georgia April, 2024</li> <li>• Integrated Groundwater Management (IGM) 2024 workshop, Tuscaloosa, AL June 2024</li> <li>• Alabama Higher Education AI exchange conference, Auburn, AL October 2024</li> <li>• American Geophysical Union Annual Meeting, Washington, D.C. December 2024</li> <li>• IEEE International Conference on Big Data, Washington, D.C. December 2024</li> </ul>
COURSES COMPLETED	<ul style="list-style-type: none"> <li>• Data Networks &amp; Cloud Computing</li> <li>• Database Systems</li> <li>• Information Security</li> <li>• Network Security Management</li> <li>• Data Analytics</li> <li>• Big Data Analytics</li> <li>• Data Mining &amp; Machine Learning</li> <li>• Statistics With R</li> </ul>
SKILLS	<ul style="list-style-type: none"> <li>• <b>Platform:</b> Unix, Windows</li> <li>• <b>Programming Language:</b> Bash, C, C++, C#, Java, Assembly language, Python, MATLAB</li> <li>• <b>Visualization and Data Analysis Tool:</b> Tableau, Hadoop, Hive, Python, Office Excel</li> <li>• <b>Database:</b> SQL (MySQL), Oracle</li> <li>• <b>Networking:</b> Cisco Networking</li> <li>• <b>Drawing and Design Tool:</b> Proteus, NI Multisim, AutoCAD</li> <li>• <b>Machine Learning:</b> Weka</li> <li>• <b>Documentation and Presentation Tool:</b> L<sup>A</sup>T<sub>E</sub>X, Microsoft Office Suite</li> </ul>
HONORS AND AWARDS	<ul style="list-style-type: none"> <li>• Graduate Teaching and Research Assistant, Tuskegee University [Fall 2023 - present]</li> <li>• Magna Cum Laude (Silver Medal) for academic excellence at AIUB.</li> <li>• Dean's List Award, AIUB. [Spring 18-19, Fall 18-19]</li> <li>• Tuition Waiver in AIUB (For Outstanding Results) [2017-2021]</li> <li>• Government Merit Scholarship in Secondary School Certificate Examination [2013-2015]</li> <li>• Government Merit Scholarship in Junior Scholarship Examination [2010-2012]</li> </ul>
MEMBERSHIP	<ul style="list-style-type: none"> <li>• Member of Association for Computing Machinery</li> <li>• Member of American Geophysical Union</li> <li>• Member of Engineering Students' Association of Bangladesh (ESAB).</li> <li>• Member of IEEE Bangladesh Section.</li> </ul>
WORK EXPERIENCE	<ul style="list-style-type: none"> <li>• Graduate Teaching and Research Assistant [Fall 2023 - present] Department of Computer Science, Tuskegee University, Tuskegee, AL 36088</li> <li>• Teaching Assistant [Fall 2020-2021] Department of Computer Science and Engineering, AIUB, Dhaka, Bangladesh.</li> </ul>
REFERENCES	<ul style="list-style-type: none"> <li>• <b>Mohammad Rahman, Ph.D.</b> [Advisor] Assistant Professor, Department of Computer Science, Tuskegee University</li> <li>• <b>Wu Fan, Ph.D.</b> Head &amp; Professor, Department of Computer Science, Tuskegee University</li> <li>• <b>Paramjit S. Kahai, Ph.D.</b> Associate Professor, Department of Computer Science, Tuskegee University</li> </ul>