

# ADITI SAHA



## CONTACT INFORMATION

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## RESEARCH INTERESTS

Data Science, Machine Learning, Quantum Computing

## EDUCATION

**Tuskegee University**, Tuskegee, AL, USA [Expected Spring 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

**Pabna Government Girls High School**, Pabna, Bangladesh. [2013]  
Secondary School Certificate (SSC) GPA: 5.00/5.00

## THESIS

**M.Sc. Thesis** : A Comparative Analysis of Quantum vs. Classical Long Short Term Memory Model in Time Series Forecasting [Proposed]

- Working on Integrated Groundwater Management, an NSF funded research project, 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.

- Topic modeling is a very interesting sub-domain of NLP, that provides focused information from a large sum of text database from different domains and literatures. In this study, a topic model has been developed with an algorithm named Latent Dirichlet Allocation (LDA) focusing the Bengali language - a novel approach for this language. It helps to predict from a given topic, and the recommendation system has been made based on the prediction algorithm of LDA.

## 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.

## PRESENTATIONS

- 62<sup>nd</sup> ACM Southeast Conference (ACMSE) 2024 conference in Marietta, Georgia April, 2024
- Integrated Groundwater Management (IGM) 2024 workshop, Tuscaloosa, AL June 2024

## SKILLS

- **Platform**: Unix, Windows.
- **Programming Language**: C, C++, C#, Java, Assembly language, Python, MATLAB.
- **Database**: SQL (MySQL), Oracle.
- **Networking**: Cisco Networking.
- **Visualization and Data Analysis Tool**: Python, Office Excel.
- **Drawing and Design Tool**: Proteus, NI Multisim, AutoCAD.
- **Machine Learning**: Weka.
- **Documentation and Presentation Tool**: L<sup>A</sup>T<sub>E</sub>X, Microsoft Office Suite.

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>
ACTIVITIES	<ul style="list-style-type: none"> <li>• Participated in Hult Prize 2021 in AIUB.</li> <li>• Music Award from Jatiyo Rabindra Sangeet Sammelan Parishad, Pabna, Bangladesh.</li> <li>• Music Award from Ekushey Boimela Udzapan Parishad, Pabna, Bangladesh.</li> <li>• Cultural Awards from Pabna Govt. Girls' High School, Pabna, Bangladesh.</li> </ul>
REFERENCES	<ul style="list-style-type: none"> <li>• <b>Mohammand 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>