

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

- 62nd 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^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.
ACTIVITIES	<ul style="list-style-type: none"> • Participated in Hult Prize 2021 in AIUB. • Music Award from Jatiyo Rabindra Sangeet Sammelan Parishad, Pabna, Bangladesh. • Music Award from Ekushey Boimela Udzapan Parishad, Pabna, Bangladesh. • Cultural Awards from Pabna Govt. Girls' High School, Pabna, Bangladesh.
REFERENCES	<ul style="list-style-type: none"> • 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 • Paramjit S. Kahai, Ph.D. Associate Professor, Department of Computer Science, Tuskegee University