

## Mostofa Najmus Sakib

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### EDUCATION & CREDENTIALS

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**Masters of Computer Science - 3.90/4.00** Fall 2020 - Summer 2022 (anticipated)  
Boise State University (BSU), Boise, ID

**Master of Science in Civil Engineering - 3.71/4.00** Fall 2018 - Summer 2020  
Boise State University, Boise, ID

**Bachelor of Science in Civil and Environmental Engineering - 3.61/4.00** Jan 2012 - Dec. 2015  
IUT, Dhaka, Bangladesh

### TECHNICAL SKILLS

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**Programming Language:** Python, Java, JavaScript, Matlab, R

**Machine/Deep Learning:** Pytorch, Tensorflow, Sklearn, Keras

**NLP Toolkits:** NLTK, Spacy, CoreNLP, Gensim

**Pretrained models:** Word2Vec, BERT, ImageNet, GloVe

**Other Python libraries:** NetworkX, Lime, Shap, Tkinter, Numpy

**Architectures:** LSTM, GRU, Attention models, Transformers, Residual Networks

### RELEVANT COURSEWORK

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- Design and analysis of algorithm
- Intro to Data Science
- Machine Learning
- Artificial Intelligence
- Natural Language Processing
- Social Media Mining
- Information Retrieval
- Database
- Human-Computer Interaction
- Data Analysis and Geostatistics
- Data Science for Civil Engineering projects
- Computation in the Geoscience

### RELEVANT EXPERIENCE

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**Graduate Assistant** August. 2021 – Present

**AI-based Security (AIBS) Lab, BSU**

- Working on the detection of sockpuppet from Wikipedia as part of the MS thesis.

**Graduate Assistant** August. 2020 – July 2021

Child Adaptive Search Tool (CAST) research project, BSU

- Identified misinformation on social media datasets utilizing network, text, and news features.
- Developed a search engine capable of query formation/suggestions and identifying candidate resources based on relevance ranking.
- Developed a readability model for children's text using lexical, syntactic features and BERT fine-tuning.
- Improved search engine result pages (adding like, dislike, bookmarks, navigation icon) for children to foster interactions.

**Graduate Teaching Assistant** Aug. 2020 – July 2021

Computer Science Department, BSU

- Tutored/Graded for CS 221 (Computer Science II) course (200 level course of Java).

**Graduate Research Assistant** Aug. 2018 – July 2020

BSU

- Developed an algorithm to differentiate between fraud and typing error from asphalt pavement dataset
- Applied machine learning algorithms to quantify the fraudulence activity
- Developed GUI for engineers and professionals to capture fraud incidences on construction project

### **Graduate Research Assistant**

**Jan. 2016 – July 2018**

Institute of Water and Flood Management (IWFM), BUET, Bangladesh

- Simulation of historical and spatially variable hypothetical cyclones along the Bay of Bengal
- Storm Surge, Flood Hazard, Wind Speed Mapping, Thrust Force analysis and River channel stabilization and evacuation system considering the effect of sea-level rise
- Preparation of location-specific cyclone warning, database, and improved model for real-time cyclone warning in Bangladesh

### **Lecturer**

**Jan. 2016 – Dec. 2017**

Dhaka International University, Dhaka, Bangladesh

- Taught several undergrad courses (Fluid mechanics, Hydrology, Transportation systems, etc.)

### **RESEARCH PUBLICATIONS**

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[1] Allen, G. and Sakib, M. N. “Engage!: Co-designing Search Engine Result Pages to Foster Interactions.” Interaction Design and Children Conference – (IDC 2021).

<https://dl.acm.org/doi/abs/10.1145/3459990.3465183>

### **RESEARCH PUBLICATIONS (Prior to Computer Science MS program)**

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#### **Journal**

[1] Akter, R.; Asik, T. Z.; Sakib, M.; Akter, M.; Sakib, M. N.; Azad, A. S. M.; Maruf, M.; Haque, A. and Rahman, M. “The Dominant Climate Change Event for Salinity Intrusion in the GBM Delta” - Climate, <https://www.mdpi.com/2225-1154/7/5/69>

[2] Mondal, M. S.; Nowreen, S. and Sakib, M. N. “Scale-Dependent Reliability of Projected Rainfalls over Bangladesh with the PRECIS Model.” - Climate, <https://www.mdpi.com/2225-1154/8/2/20>

[3] Muhit, I. B.; Sakib, M. N. and Ahmed, S. S. “Aluminum and E-glass epoxy plates behavior subjected to shock loading.” - Advances in Material Research, [http://www.techno-press.org/fulltext/j\\_amr/amr6\\_2/amr0602003.pdf](http://www.techno-press.org/fulltext/j_amr/amr6_2/amr0602003.pdf)

#### **Conference Proceedings**

[1] Mondal, M. S. and Sakib, M. N. “Scale-dependent reliability of the PRECIS model for rainfall projection in the Southern Bangladesh.” 6th International Conference on Water & Flood Management (ICWFM-2017).

[2] Chowdhury, M. M. A.; Sakib, M. N.; Jahan, M. and Rahman, M. A. “Social Sufferings Due To Saline Water Issues in Mongla Upazilla, Bagherhat.” International Conference on Engineering Research, Innovation and Education (ICERIE-2017)

[3] Akter, R.; Sakib, M.; Sakib, M. N.; Zaman, S.; Haque, A.; Rahman, M. and Hossain, D. “Assessment of Salinity Hazard Based on Residence Time of Salinity in Bangladesh Coast.” 6th International Conference on Water & Flood Management (ICWFM-2017).

[4] Akter, S.; Zahra, F. T.; Sakib, M. N.; Sen, D. and Chowdhury, M. A. “Analysis of River Bank Erosion And Calculation of Universal Erosion Co-Efficient using Space-Borne Gis And Rs Technique: A Study on lower Reach of Jamuna River.” International Conference on Disaster Risk Mitigation (ICDRM-2017)

- [5] Mondal, M. S. and Sakib, M. N. “Scale-dependent reliability of the PRECIS model in rainfall projection for coastal areas in Bangladesh.” 3rd International Conference on Advances in Civil Engineering, 2016 (ICACE 2016).
- [6] Chowdhury, M. M. A.; Sakib, M. N.; Jahan, M. and Rahman, M. A. “A Statistical Assessment of Groundwater Quality in Nilphamari Pourashava: Nilphamari District, Bangladesh.” 3rd International Conference on Advances in Civil Engineering, 2016 (ICACE 2016).

**Journal (On process)**

- [1] Sakib, M. N.; Sadegh, M. and Mishra, D. “Development of fraud detection algorithm and application of ML algorithms to detect Plausible Correction and Suspicious Alteration cases”
- [2] Sakib, M. N.; Sadegh, M. and Mishra, D. “Monetary analysis to quantify the amount of economic loss due to data manipulation on asphalt pavement projects”

**References**

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1. Dr. Francesca Spezzano, Ph.D  
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<https://sites.google.com/view/francescaspezzano/home>
2. Dr. Edoardo Serra, Ph.D  
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<https://sites.google.com/site/serraedoardo/>
3. Dr. Nasir Eisty, Ph.D  
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<http://nasireisty.com/>
4. Dr. Mojtaba Sadegh, Ph.D  
Assistant Professor, Department of Civil Engineering, Boise State University  
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