

Mostofa Najmus Sakib

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[Google Scholar](#) | [Github](#) | [Personal Website](#) | [Linkedin](#)

Education & Credentials

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

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

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, Matplotlib, Seaborn

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

Relevant Coursework

- 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

Graduate Assistant | AI-based Security (AIBS) Lab, BSU Aug. 2021 – Present

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

Graduate Assistant | Child Adaptive Search Tool (CAST) research project, BSU Aug. 2020 – July 2021

- Developed a readability model for children's text using lexical, syntactic features, and BERT fine-tuning. [[Code](#)]
- Improved search engine result pages (adding like, dislike, bookmarks, navigation icon) for children to foster interactions. [[Code](#)]

Graduate Teaching Assistant | Computer Science Department, BSU Aug. 2020 – July 2021

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

Graduate Research Assistant | Civil Engineering Dept. BSU Aug. 2018 – July 2020

- Developed an algorithm to differentiate between fraud and typing error from construction dataset.

- Introduced a data-driven fraud detection system for engineers/professionals to capture fraud incidences on construction projects. [[Code](#)]

Research Assistant | Institute of Water & Flood Management, Bangladesh **Jan. 2016 – July 2018**

- Simulation of historical and spatially variable hypothetical cyclones along the Bay of Bengal.
- Preparation of location-specific cyclone warning, database, and improved storm-surge, flood, wind, and thrust force model for a real-time cyclone warning system in Bangladesh.

Lecturer | Dhaka International University, Dhaka, Bangladesh **Jan. 2016 – Dec. 2017**

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

Relevant Projects

Development of a search engine | [Python](#) **Oct. 2021**

- Developed a search engine from scratch to translate the core IR concepts into practice.
- This standalone SE is capable of suggesting queries, identifying and ranking candidate resources, generating snippets for top matched resources.

Movie Recommendation system | [Python](#) **Oct. 2021**

- Build a content based recommender system using the [disney plus movies and tv shows](#) dataset.

BERT fine-tuning | [Python](#) **Apr. 2021**

- Classified the [WOS dataset](#) using torch with a hugging face BERT tokenizer and pre-trained transformer model.

Context-free grammar design | [Python](#) **Feb. 2021**

- Generated context-free grammar for tamarian language with NLTK library to apply parts of speech tag instead of words.

Semi-optimal player for suspicion game | [Java](#) **Dec. 2020**

- Optimized the game moves using uncertainty approaches.

Misinformation detection on social media datasets | [Python](#) **Dec. 2020**

- Identified misinformation on social media datasets utilizing network, text, and news features.

Agricultural change calculation | [Python](#) **Dec. 2019**

- Calculated the agricultural trend and measured the impact of urban development and climate change on the rural land of Idaho. [Data: USDA census of agriculture, US census, terraclimate]

Research Publications

[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>

Selected Publications (Prior to Computer Science MS program)

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

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”

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).

References

1. Dr. Francesca Spezzano, Ph.D <https://sites.google.com/view/francescaspezzano/home>
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2. Dr. Edoardo Serra, Ph.D <https://sites.google.com/site/serraedoardo/>
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3. Dr. Nasir Eisty, Ph.D <http://nasireisty.com/>
Assistant Professor, Computer Science Department, Boise State University
Email: nasireisty@boisestate.edu , Contact No: (208) 426-4022
4. Dr. Mojtaba Sadegh, Ph.D
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