

Syeda Sabrina Akter

CONTACT INFORMATION [George Mason University](#)
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RESEARCH INTERESTS Large Language Models, Generative AI, Deep Learning, Text and Framing Analysis, Educational Assessment and Evaluation, Low-Resource and Multilingual NLP, Speech Recognition, Speech Translation, Language Documentation.

PROGRAMMING SKILLS Python, PyTorch, TensorFlow, Java, C, C++, PHP, UNIX shell scripting, SQL, MySQL, MATLAB, and others

EDUCATION [George Mason University](#), Fairfax, VA

Ph.D., Computer Science, 2026 (Expected)

- Advisor: [Antonios Anastasopoulos, Ph.D, Assistant Professor](#)

M.S., Computer Science, 2024

- Advisor: [Antonios Anastasopoulos, Ph.D, Assistant Professor](#)
- Cumulative GPA: 4.00/4.00

[Bangladesh University of Professionals](#), Dhaka, Bangladesh

B.Sc, Computer Science and Engineering, 2018

- Bachelor Thesis: *Development of a Machine Learning Framework for Sorting and Classifying Unstructured Data from Resumes*
- Advisor: [Hasan Sarwar, Ph.D](#)
- Cumulative GPA: 3.70/4.00

RESEARCH EXPERIENCE [Graduate Researcher, George Mason University](#) Jan 2021 - Present
Advisor: [Antonios Anastasopoulos, Ph.D, Assistant Professor](#)

- **LLMs in Specialized Domains:**

- *Education*: Applied LLMs to automate and simplify the analysis of school improvement plans, enhancing evaluation of impacts on school environments and student growth.
- *Policy Analysis*: Utilized LLMs for topic extraction from tech policy documents and interviews, focusing on automating and streamlining the process traditionally requiring manual expert annotation.

- **Multilingual News Framing Analysis:**

- Enhanced multilingual news framing analysis using fine-tuning techniques with LLMs.
- Conducted data collection through crowdsourcing; established benchmarks for analysis in Bengali and Portuguese.

- **Predicting Performance of Multilingual PLMs Across Multiple Languages**

- Developed a performance prediction system for multilingual NLP models based on the LITMUS model, enhanced with three new features and model ensembling.
- Achieved improvements over the baseline.
- [SUMEval 2022 Shared Task](#).

PUBLICATIONS	<ol style="list-style-type: none"> 1. Seth B Hunter, David S Woo, Antonios Anastasopoulos, Katherine M Bowser, Syeda S Akter, Sarah L Hairston, Thomas W Hairston, and Eter Mjavanadze. "Principal-Supervisor and Machine Generated Evaluation Scores of Principal Performance Portfolios in a Rurally-Focused Multi State Evaluation System: Their Reliability, Validity, Differences, and Determinants". 49th Annual Conference of Association for Education Finance and Policy. March 14-16, 2024. Baltimore, Maryland. 2. Syeda Sabrina Akter and Antonios Anastasopoulos. 2024. A Study on Scaling Up Multilingual News Framing Analysis. In Findings of the Association for Computational Linguistics: NAACL 2024, pages 4156–4173, Mexico City, Mexico. Association for Computational Linguistics. 3. Syeda Sabrina Akter and Antonios Anastasopoulos. 2022. The GMU System Submission for the SUMEval 2022 Shared Task. In Proceedings of the First Workshop on Scaling Up Multilingual Evaluation, pages 13–20, Online. Association for Computational Linguistics. 4. Islam, Muhammad Nazrul, Toki Tahmid Inan, Suzzana Rafi, Syeda Sabrina Akter, Iqbal H. Sarker, and AKM Najmul Islam. "A systematic review on the use of AI and ML for fighting the COVID-19 pandemic." IEEE Transactions on Artificial Intelligence 1, no. 3 (2020): 258-270. 5. Salehin, Saadnoor, Syeda Sabrina Akter, Anika Ibnat, Tasmiah Tamzid Anannya, Nurun Nahar Liya, Manisha Paramita, and Md Mahboob Karim. "An IoT based proposed system for monitoring manhole in context of Bangladesh." In 2018 4th International Conference on Electrical Engineering and Information & Communication Technology (iCEEICT), pp. 411-415. IEEE, 2018.
TEACHING EXPERIENCE	<p>Teaching Assistant, Department of CS, GMU</p> <ul style="list-style-type: none"> • Courses: Advanced Natural Language Processing, Software Testing, Data Structures, Object Oriented Programming, Database Concepts. <p>Lecturer, Department of Computer Science and Engineering, Northern University Bangladesh Jan 2019 - June 2020</p> <ul style="list-style-type: none"> • Courses: Data Structure, Structured Programming Language, Object Oriented Programming (C++), Operating Systems
RESEARCH TALK	<ul style="list-style-type: none"> • Presented Principal Assessment research in The 11th Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL 2024) • Presented Multilingual News Framing research in The ACM Capital Region Celebration of Women in Computing Conference (CAPWIC), 2023.
AWARDS	<p>Competitive Awards</p> <ul style="list-style-type: none"> • Distinguished Academic Achievement Award, 2023-2024, Department of Computer Science, GMU • Outstanding Graduate Teaching Assistant Award, 2022-2023, Department of Computer Science, GMU • Best Project Award, Faculty of Electrical and Computer Engineering (2017, MIST) • Commandant's List Award for Academic Excellence (2016, MIST) • IUT ICT Fest Project Showcasing – Runners Up (2017, Islamic University of Technology)
SERVICES	<ul style="list-style-type: none"> • Volunteer for 2022 Annual Conference of the North American Chapter of the Association for Computational Linguistics • Teaching Assistant to a guest Lecture in Georgetown University, 2023 • Teaching Assistant for Summer Guild Breakthrough tech 2021, 2022