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Sadia Nur Nazifa

Summary

- Lecturer in Computer Science and Engineering at the University of Scholars, teaching programming, systems analysis, and competitive programming while mentoring students in contests such as IUPC.
- Over four years of interdisciplinary research experience in Artificial Intelligence, Human-Computer Interaction, IoT, with ongoing projects spanning deep learning, large language models, and public health data analysis.
- Published in international venues including *Scientific Reports*, *Lecture Notes in Networks and Systems*, and IEEE ICCIT, with recognition such as the Best Technical Presentation award (ICCIT 2024).
- Leadership experience as Science Subteam Lead of MIST Mongol Barota, representing Bangladesh in global rover competitions (University Rover Challenge and Anatolian Rover Challenge) with multiple top placements.
- Proficient in Python, JavaScript, C/C++, SQL, MATLAB, and research tools including GitHub, Arduino, AutoML, Figma, and Android Studio.

Research Interest

- Artificial Intelligence, Human-Computer Interaction, Natural Language Processing
- Internet of Things, Machine Learning

Education

Military Institute of Science & Technology 2020 - 2024
B.Sc. in Computer Science and Engineering CGPA: 3.33/4.00

Holy Cross College 2017 - 2019
Higher Secondary school Certificate in Science GPA: 5.00/5.00

Professional Experience

Work Bright Business Solutions | Data Analyst March 2025– Present
- Analysing medical and legal records of patients across two software platforms (Zoho and DrChrono), as well as overseeing attorney portals, while ensuring strict confidentiality.

University of Scholars | Lecturer in Department of CSE August 2024 - Present
- Deliver lectures, guide students in problem-solving, organize programming and project showcase events, and mentor students in their academic and research pursuits.

Brain Station 23 | Intern Jan 2023 - Feb 2023
- Completed projects using Python and Django, applying algorithm development and full-stack design to solve real-world problems in collaborative team settings.

MIST Mongol Barota | Science Subteam Lead Jan 2023 - March 2024
- Led the science subteam in integrating science modules into robotics projects, ensuring that all scientific components were aligned with project objectives.
- Conducted AI/ML research on biomolecule detection methods, focusing on enhancing the efficiency and accuracy of detection in the context of robotics and extraterrestrial exploration.

MIST Mongol Barota | Team Associate Oct 2020 - Dec 2022
- Researched soil analysis using biomolecules for extraterrestrial environments, focusing on efficient and accurate ML detection methods.
- Contributed to the University Rover Challenge and Anatolian Rover Challenge through rover system design, development, and project presentation.

Teaching Experience

Lecturer in CSE | University of Scholars — Spring 2025

- CSE 1213-0613: Structured Programming Language
- CSE 1214-0613: Structured Programming Language Lab
- CSE 2121-0613: System Analysis and Design
- CSE 2122-0613: System Analysis and Design Lab
- CSE 2105-0613: Competitive Programming - I
- CSE 3108-0613: Integrated Design Project - I

Lecturer in CSE | University of Scholars — Fall 2024

- CSE 1213-0613: Structured Programming Language
- CSE 1214-0613: Structured Programming Language Lab
- CSE 2105-0613: Competitive Programming - I
- CSE 2205-0613: Competitive Programming - II
- CSE 2234-0613: Numerical Analysis with MATLAB

Ongoing Research

- Research on Deep Learning for Healthcare Applications *(Ongoing, Under Review)*
- Development of a Smart IoT and HCI System for agriculture technology
- Comparative study on Deep Learning and Transfer Learning in pattern recognition
- Evaluation of Large Language Models in Natural Language Processing and Usability
- Statistical exploration of Public Health and Self-Medication Patterns in Bangladesh

Publications

1. Ashif Mahmud Joy, Dalia Akter, **Sadia Nur Nazifa**, Shaila Sharmin, and Md. Ahsan Arif. Self Medication Factors in Bangladesh. Version V2. Mendeley Data, 2025. DOI: 10.17632/ycyr7km84w.2
2. **Sadia Nur Nazifa**, Shadmanee Tasneem Mulk, Tasfia Akter Sara, Tasnim Ullah Shakib, and Muhammad Nazrul Islam. "Unlocking Voices: Assessing the Usability and Accessibility of Mobile Applications for Stutter Reduction". In: 2024 27th International Conference on Computer and Information Technology (ICCIT). 2024, pp. 1016–1021. DOI: 10.1109/ICCIT64611.2024.11022350
3. Akib Zaman, Fardeen Ashraf, Haseena Khan, Faria Noshin Ahona, Oliullah Samir, Asif Mahmud Rayhan, **Sadia Nur Nazifa**, Hafsah Chowdhury, and Md. Mahbubur Rahman. "A multiple biomolecules-based rapid life detection protocol embedded in a rover scientific subsystem for soil sample analysis". In: Scientific Reports 14.26645 (2024). DOI: https://doi.org/10.1038/s41598-024-77808-6
4. Tasfia Sara, **Sadia Nur Nazifa**, Shadmanee Tasneem, Tasnim Ullah Shakib, and MD Nazrul Islam. "PPDHero: Requirements Elicitation and Development of a System to Empower New Mothers on Postpartum Depression". In: Lecture Notes in Networks and Systems 1051 (2024). DOI: 10.1007/978-3-031-64850-2_37

Notable Milestones

- **Received the Best Technical Presentation award**, the27th IEEE ICCIT — 2024
- **5th in Anatolian Rover Challenge (ARC)**, the Space Exploration Society (UKET), Turkiye. — 2023
- **2nd Runners up in Anatolian Rover Challenge (ARC)**, the Space Exploration Society (UKET), Turkiye. — 2022
- **1st in virtual University Rover Challenge (URC)**, the Mars Society, USA. — 2021

Skills

Programming Languages: Python, JavaScript, C/C++, PHP, SQL, Assembly Language, HTML/CSS, Shell, Oracle, LaTeX, Java

Tools: MATLAB, GitHub, Arduino, Cisco Packet Tracer, Proteus, Flutter, AutoML, Figma, Android Studio, Blender