

Towsif Alam Chowdhury

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SUMMARY

Highly motivated and results-driven professional with experience in the tech industry, complemented by a strong academic background. With a solid foundation in research and innovative thinking, I am enthusiastic about solving real-world problems using cutting-edge technologies. I am also passionate about innovation and dedicated to continuous learning, striving to stay ahead in the ever-evolving world of technology.

RESEARCH INTEREST

- Statistical learning, data analysis, and data mining
- Deep Learning
- Computer Vision
- Natural Language Processing

EDUCATION

North South University, Dhaka, Bangladesh

Bachelor of Science in Computer Science and Engineering | January 2017 – April 2021

CGPA – 3.60/4.00 | **Distinction** – Cum Laude | **Specialized Trail** – Artificial Intelligence

PUBLICATIONS

Patent

- Hossain, Md. I., **Chowdhury, T. A.**, Polin, Md. Z. H., & Mahmud, S. (2023). **Method and apparatus for providing MCPTT service**. Application number: 10-2023-0103040, filed July 08, 2023. (*Patent pending*)

Journal Paper

- Youme, S. K., **Chowdhury, T. A.**, Ahamed, H., Abid, M. S., Chowdhury, L., & Mohammed, N. (2021). **Generalization of Bangla Sign Language Recognition Using Angular Loss Functions**. IEEE Access, 9, 165351–165365. [doi:10.1109/ACCESS.2021.3134903](https://doi.org/10.1109/ACCESS.2021.3134903)
- Youme, S. K., **Chowdhury, T. A.**, Ahamed, H., Abid, M. S., Sohrawardi, R. B., & Siddique, S. **RER: Recycled Experience Replay, Blending Oldest Memories with Recent Selective Experiences to Improve Remembering**. (*Work-in-progress*)

Conference Paper

- Youme, S. K., Abid, M. S., **Chowdhury, T. A.**, Ahamed, H., & Siddique, S. (2022). **Local Climate Zone Mapping Using Clustering Algorithms: A Case Study of Dhaka, Bangladesh**. IGARSS 2022 – 2022 IEEE International Geoscience and Remote Sensing Symposium, 3139–3142. [doi:10.1109/IGARSS46834.2022.9883206](https://doi.org/10.1109/IGARSS46834.2022.9883206)

WORK EXPERIENCE

Samsung R&D Institute Bangladesh, Dhaka, Bangladesh

- **Software Engineer** | September 2022 – Present

Collaborating with various researchers and inventors to analyze research methodologies and identify patentable inventions within emerging technology areas. This involves identifying novel and non-obvious aspects of the research that have the potential for exclusive rights, as well as understanding the technical feasibility and potential applications of the inventions.

- **Intern** | April 2022 – August 2022

Supported intellectual property (IP) strategy development, and assisted inventors in assessing novelty and non-obviousness to generate patentable ideas.

Department of Electrical & Computer Engineering, North South University, Dhaka, Bangladesh

- **Research Assistant** | May 2021 – May 2022

Worked on designing a reinforcement learning algorithm to improve learning by using a double replay memory consisting of short-term and long-term event memories.

- **Teaching Assistant** | March 2020 – January 2022

Facilitated discussion sections or tutorials; held weekly office hours; graded homework, assignments, and exam papers; prepared answer keys or supplementary notes.

Department of Mathematics and Physics, North South University, Dhaka, Bangladesh

- **Lab Instructor** | October 2021 – April 2022

Independently taught undergraduate lab classes; provided consultation to students and was responsible for evaluating and grading the students.

GRANT

Name of Grant	CTRG 2021-2022
Grant offered by	North South University, Dhaka, Bangladesh
Project Title	High performance less resource-intensive Deep Reinforcement Learning methods for applications in autonomous agents and search and rescue robotics
Grant amount	BDT 500,000
Role	Research Assistant

TECHNICAL SKILLS

Programming languages	Python, C
Libraries	Pytorch, Tensorflow, Pandas, Matplotlib
Familiar tech domains	Artificial Intelligence, Push-to-talk services, AR/VR, Metaverse, IoT, Health
Research domains	Machine Learning, Deep Learning, Computer Vision, Reinforcement Learning