

# Towsif Alam Chowdhury

Software Engineer  
Samsung R&D Institute Bangladesh

Phone: +880 1965287811  
Email: [towsif.chowdhury@northsouth.edu](mailto:towsif.chowdhury@northsouth.edu)  
Website: <https://towsif13.netlify.app/>  
Resources: [Github](#), [LinkedIn](#), [ResearchGate](#)

---

## SUMMARY

Highly motivated tech enthusiast with over two years of experience in research and development at Samsung's Innovation and Research Management team, coupled with prior academic research as a university Research Assistant in computer science. Passionate about leveraging artificial intelligence and machine learning techniques to solve complex problems, with a focus on computer vision, natural language processing, and reinforcement learning.

---

## RESEARCH INTEREST

- Computer Vision
- Reinforcement Learning
- 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

---

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

## TECHNICAL SKILLS

---

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