

Showrin Rahman

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Portfolio | LinkedIn: [showrin-rahman](#) | GitHub: [showrin20](#)

Education

BRAC University

B.Sc. in Computer Science

CGPA: 3.62/4.00 (distinction, cum laude)

Thesis: [MAMT: Masked Autoencoder and Mamba-Based Self-Supervised Segmentation of SAR Imagery for Riverbank Erosion Detection](#)

Dhaka, Bangladesh

June 2021 – September 2025

Bard College

OSUN Undergraduate Student Mobility Exchange

Activities: TMI Project; Bard Office of Sustainability (BOS)

Annandale-on-Hudson, NY, USA

January 2024 – May 2024

Publications

1. S. Rahman, **S. H. Rahman**, K. Kim, M. Jawad, “Multi-Scale Feature Fusion with Adaptive Attention for Robust Image Deblurring,” Published at [IEEE Eurocon 2025](#), Poland. ([Paper](#))
2. M. I. Rakib, **S. Rahman**, J. J. Mondal, X. Xiao, D. Lewis, A. Mileo, M. A. Manab, “TWIG: Two-Step Image Generation Using Segmentation Masks as an Intermediary in Diffusion Models to Prevent Copyright Infringement,” Published at [Springer IFIP 2025](#). ([Paper](#))
3. S. Rahman, **S. H. Rahman**, M. Jawad, M. Foysal, M. Hossain, “Riverbank Change Detection in the Jamuna River Basin, Bangladesh,” Published at [IEEE ACDSA 2025](#), Antalya, Türkiye. ([Paper](#))

Preprints

1. K. M. Rahman, **S. Rahman**, S. S. Srishty, “TextDiffuser-RL: Efficient and Robust Text Layout Optimization for High-Fidelity Text-to-Image Synthesis,” [arXiv preprint arXiv:2505.19291](#), 2025. ([Paper](#))

Experience

AI Application Developer, ACI PLC

February 2026 – Present

Dhaka, Bangladesh

- Designed a 9-stage multi-agent generative pipeline (**StyleGenAI**) that enforces cultural and structural constraints on garment generation through a rule-based verification layer – a hybrid symbolic–neural approach to controllable generation.
- Built an **LLM**-based automated assessment system (**AnyExamAI**) for open-ended response generation and scoring, addressing evaluation bottlenecks in large-scale language testing.
- Developed an agentic document and scheduling assistant (**Agent MD**) integrating Google Drive and Calendar, enabling natural-language interaction over documents and schedules.
- Currently investigating **diffusion**-based virtual try-on, focusing on garment-consistent image synthesis under pose and identity constraints.

Associate AI Engineer (previously AI Intern), Ontik Technology

July 2025 – February 2026

Dhaka, Bangladesh

- Designed a retrieval-augmented conversational system (**EzeeChat**) using vector-based semantic search (**pgvector**) over unstructured institutional data, deployed for the University of Toronto.
- Built an agentic data-intelligence pipeline (**RearWindow**) combining automated ETL with **LLM agents** for spatial pattern analysis and reporting.
- Developed a multi-agent reasoning system (**Properta**) coupling **LLM**-based inference with structured data retrieval for property valuation and market analysis.

Research Collaborator (R&D), 276 Holdings Co., Ltd.

July 2025 – December 2025

AI & Data Division – South Korea (Remote)

- Contributed to an industry R&D project in **computer vision** and **intelligent document processing (IDP)**, developing OCR pipelines with EasyOCR and Tesseract using document-specific preprocessing.
- Improved document recognition accuracy through **MFSAA-based image deblurring**, extending research published at IEEE Eurocon 2025, and conducted systematic experimental evaluation and prototyping. ([Certificate](#))

- Taught 100+ students beginner-level Python, JavaScript, HTML, and CSS.

Technical Skills

Programming Languages	Python, JavaScript, C
ML & Deep Learning	TensorFlow, Keras, PyTorch, scikit-learn, NLTK, OpenCV, Scikit-LLM
Data Analysis & Viz	NumPy, Pandas, Matplotlib, Seaborn
LLMs & Generative AI	Hugging Face, Embeddings, RAG Pipelines
Agentic AI & Automation	CrewAI, n8n, Google ADK
Backend & Frontend	FastAPI, Express.js, Node.js, React.js, REST APIs
Databases	PostgreSQL, MySQL, MongoDB
Cloud & MLOps	AWS EC2, Google Cloud Platform (GCP), Docker, GitHub Actions
Web Scraping & Automation	BeautifulSoup, Selenium
Tools & Platforms	Git, GitHub, Linux (Ubuntu), Kaggle, Jira, Confluence, Roboflow
Basic Robotics	Arduino

Honors and Awards

- **Dean’s List** (2 times) and **Vice Chancellor’s List** (1 time) 2021 – 2025
Awarded during undergraduate studies at BRAC University.
- **OSUN Undergraduate Mobility Scholarship** Spring 2024
Full funding for a semester at Bard College, covering tuition, accommodation, living expenses, insurance, and travel.
- **2nd Runner-Up**, 3rd Kibo Robot Programming Challenge 2022
Organized by the Japan Aerospace Exploration Agency (JAXA).
- **Top 5 Finalist**, FOREWARN Disaster Hackathon 2.0 – competed against 84 teams.
- **Top 15 Selection**, Banglalink Womentor Program – selected from 400 applicants.

Leadership and Extracurricular Activities

BRACU Mongol Tori – Senior I	February 2022 – December 2023
Student Organization – Dhaka, Bangladesh	

- Built an offline rover mapping system with OSM achieving a 20% efficiency gain; used OpenCV, Roboflow, and Kaggle datasets, and developed the frontend for the BRACU Mongol Tori website.

Robotics Club of BRAC University (ROBU) – Secretary	January 2024 – June 2024
Student Organization – Dhaka, Bangladesh	

- Served as a panelist in a 40-member Research and Project Management department, managed the flagship Basics of Robotics course with Arduino, and developed 5+ projects using ROS and OpenCV.

Languages

English: Advanced – IELTS Academic: Overall 7.5 (Listening 8, Reading 8.5, Writing 6.5, Speaking 7.5) | **Bengali:** Native | **Hindi:** Conversational

References

Dr. Md. Khalilur Rahman Professor, Dept. of CSE Founder, Robotics Lab & NASTER Lab BRAC University, Dhaka, Bangladesh Email: khalilur@bracu.ac.bd	Dr. Md. Golam Rabiul Alam Professor, Dept. of CSE BRAC University, Dhaka, Bangladesh Email: rabiul.alam@bracu.ac.bd	Dr. Md. Ashraful Alam Associate Professor Director, CVIS Research Lab, Dept. of CSE BRAC University, Dhaka, Bangladesh Email: ashraful.alam@bracu.ac.bd
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