

MD Tanvir Islam

COMPUTER VISION RESEARCHER · FULL-STACK DEVELOPER

tanvirislam.cqu@gmail.com [Google Scholar](#) [ORCID](#) [ResearchGate](#) [GitHub](#) [LinkedIn](#)

PROFILE

I'm a computer vision researcher focused on Medical Image Analysis. As a master's researcher at Chongqing University, I developed deep-learning methods for skin lesion segmentation and classification. Currently, I work as a full-stack developer at KI-Quadrat, building AI-integrated web applications.

Research interests: Medical AI · Medical Image Analysis · Medical Foundation Models

EXPERIENCE

- Full-Stack Web Developer

Feb 2026 – Present

KI-Quadrat Systemhaus GmbH · Remote · HQ Austria

Leading full-stack development of an AI-powered web application (Next.js, React, TypeScript) and contributing to its RAG system.
- Web Developer Intern

Oct 2025 – Jan 2026

KI-Quadrat Systemhaus GmbH · Remote · HQ Austria

Full-stack work with Next.js, Node.js, Convex and PostgreSQL on the core product.
- MSc Researcher – Deep Learning & Medical Image Analysis

Sep 2022 – Sep 2025

Chongqing University · Supervisor: Assoc. Prof. Yunfei Yin

Developed MRLSA-Net for skin lesion segmentation and a DermoGrabcut-based classification pipeline; evaluated across ISIC-2018, PH2 and HAM10000.

EDUCATION

- Master of Engineering, Computer Science and Technology

2022 – 2025

Chongqing University · Chongqing, China

Thesis: Research on Classification and Segmentation of Skin Lesion Images Based on Deep Learning
- Bachelor of Science, Computer Science and Technology

2017 – 2021

Jiangxi Normal University · Jiangxi, China

Thesis: Role-Based Access Control in E-Commerce Web Application

PUBLICATIONS

1. **M. T. Islam**, Y. Yin, Z. Timbi, M. M. Islam, Z. Yuan, S. M. M. Pasha (2026). MRLSA-Net: An attention-enhanced framework for robust skin lesion segmentation. *Biomedical Signal Processing and Control*, 120, 110016. [doi:10.1016/j.bspc.2026.110016](#) · **First author**
2. **M. T. Islam**, Y. Yin, D. Deng, M. M. Islam, S. M. M. Pasha (2025). Leveraging DermoGrabcut Segmentation for Improved CNN-Based Skin Lesion Classification. *ICIC 2025, Springer LNBI 15867*, pp. 335–346. [doi:10.1007/978-981-95-0030-7_29](#) · **First author**
3. M. M. Islam, Y. Yin, **M. T. Islam**, Y. Zheng, A. Dey (2026). A Dual-Stream Framework for Landslide Segmentation with Cross-Attention Enhancement and Gated Multimodal Fusion. *Computers, Materials & Continua*, 86(3). [doi:10.32604/cmc.2025.072550](#)
4. Y. Yin, Z. Timbi, Z. Yuan, S. Xiong, **M. T. Islam**, A. Dey, S. Ray (2026). Flexible Dilated Convolution and Bidirectional Pyramid Approach to Polyp Segmentation. *Biomedical Signal Processing and Control*, 115, 109409. [doi:10.1016/j.bspc.2025.109409](#)
5. Y. Yin, Z. Yuan, **I. M. Tanvir**, X. Bao (2024). Electronic Medical Records Imputation by Temporal Generative Adversarial Network. *BioData Mining*, 17(1), 19. [doi:10.1186/s13040-024-00372-2](#)

6. S. M. M. Pasha, C. Ye, S. R. Sohag, M. M. Ali, **M. T. Islam** (2025). AI-Driven Detection and Mitigation of Backdoor Data Infiltration Among IoT Networks. *IJCNN 2025, IEEE*, pp. 1–7. [doi:10.1109/ijcnn64981.2025.11229034](https://doi.org/10.1109/ijcnn64981.2025.11229034)
7. S. Choudhary, C. Hu, S. M. M. Pasha, **M. T. Islam**, R. Islam, A. B. Himo (2025). An Early Detection of Risky Crowd Dynamics Scheme Based on Motion Entropy and Scene Semantics. *ICISC 2025, Springer*, pp. 215–234. [doi:10.1007/978-981-95-6203-9_12](https://doi.org/10.1007/978-981-95-6203-9_12)

RESEARCH & TECHNICAL SKILLS

Research / ML: Deep Learning, CNNs, Image Segmentation, Image Classification, Attention Mechanisms, PyTorch, TensorFlow, OpenCV, RAG Systems, LaTeX

Engineering: Python, TypeScript, JavaScript, Java, C++, React, Next.js, TanStack Start, Astro, Node.js, Tailwind CSS, PostgreSQL, Convex, MongoDB

Languages: Bengali (native) · English (professional) · Mandarin (conversational) · Hindi (proficient)

PROJECTS

MRLSA-Net (Research code) – Official PyTorch implementation of MRLSA-Net, a U-shaped encoder–decoder with multi-scale feature gating and local self-attention for skin lesion segmentation. github.com/M-Tanvir-Islam/MRLSA-Net

KrishiDoc (Ongoing · Hobby project) – A lightweight image classifier for paddy diseases, aimed at farmers in Bangladesh. Current work studies why strong in-dataset scores drop on real field photographs. github.com/M-Tanvir-Islam/paddy-disease-detection-ml

Online Book Shop (Bachelor's thesis) – A MERN e-commerce prototype exploring role-based access control across the API and the interface, with JWT auth and refresh-token cookies. github.com/M-Tanvir-Islam/WebApp-Online-Book-shop

HONORS & AWARDS

- Chongqing University Presidential Scholarship – Three consecutive years · 2022–2025
- Jiangxi Provincial Government Scholarship – Four consecutive years · 2017–2021
- Outstanding International Student Leader – Chongqing University · 2024–2025
- First Prize, International Student Calligraphy, Painting & Photography Competition – Chongqing University · 2024