

Md Imam Ahasan

Chongqing University, Huxi Campus, Shapingba District, Chongqing 401331, China

☎ (+86) 13008309195 | ✉ emamahasane@gmail.com | 🌐 imamahasane | 📄 imamahasane

Education

Chongqing University (CQU)

M.Sc. in Computer Science

GPA: 83.4/100 Top 1% of international cohort

Thesis: “Research on Low-Dose Computed Tomography Image Reconstruction” – Developed DACD and GenDiff, two physics-guided diffusion frameworks for LDCT reconstruction. Supervisor: Dr. Guangchao Yang, College of Computer Science, CQU

Chongqing, China

Sep 2023 – Jun 2026

Daffodil International University (DIU)

B.Sc. in Computer Science and Engineering

GPA: 71.5/100

Thesis: “Gronthon: Bangla PDF to Text Conversion Application” – Developed an end-to-end OCR pipeline for Bengali script digitization. Supervisor: Dr. Md Zahid Hasan, Computer Science and Technology, DIU

Dhaka, Bangladesh

Sep 2017 – Sep 2021

Publications

(FA) = First Author. [†] = Corresponding Author. [C] = Conference Paper. [J] = Journal Article. [R] = Under Review.

Peer-Reviewed Conference/Journal Papers

- [C1] (FA) **Md Imam Ahasan**, Guangchao Yang[†], A F M Abdun Noor, S M Hasan Mahmud. “Dose-Aware Cold Diffusion with Physics Consistency for Generalizable Low-Dose CT Reconstruction.” *Intl. Joint Conf. on Neural Networks (IJCNN 2026)*. [Accepted · CCF-C]
- [C2] A F M Abdun Noor, **Md Imam Ahasan**, Mohammad Azam Khan, Guangchao Yang[†]. “GeGLUNet: Structural Retinal Vessel Segmentation via Attention-Gated GeGLU and Contrastive Supervision.” *Conf. on Pattern Recognition and Computer Vision (PRCV 2025)*. 10.1007/978-981-95-5631-1_35. [Published · CCF-C]
- [C3] Md Mahfuzur Rahman, Pengzhan Zhou[†], A F M Abdun Noor, **Md Imam Ahasan**. “MTF-Net: Multi-Modal Temporal Feature Fusion Network for Pedestrian Intention Prediction.” *Intl. Conf. on Cloud and Network Computing (ICCNC 2026)*. [Accepted · EI]
- [C4] Anum Malik, Mahnoor Buriro, Muhammad Younas Khan, **Md Imam Ahasan**. “MoSSGate: Memory-Modulated State-Space Gating for Skin Lesion Segmentation.” *ICCNC 2026*. [Accepted · EI]
- [J1] Ahtisham Waheed, Yunfei Yin[†], A F M Abdun Noor, **Md Imam Ahasan**. “Direction-Curvature Aware Feature Integration for Robust Lane Detection.” *Computers, Materials and Continua (CMC)*. [Accepted · SCIE]

Under Review

- [R1] (FA) **Md Imam Ahasan**, Guangchao Yang[†], A F M Abdun Noor, S M Hasan Mahmud[†]. “GenDiff: A Dose and Anatomy Aware Diffusion Model with Structural Prior Refinement for Low-Dose CT Reconstruction and Generalization.” *PeerJ Computer Science*. [Under Review · SCIE]
- [R2] Md Mustafizur Rahman, Guangchao Yang, A F M Abdun Noor, **Md Imam Ahasan**, Md Mahfuzur Rahman. “TSCA-Net: Temporal-Spatial Clique Attention for Interpretable Multimodal Pedestrian Trajectory Prediction.” *IEEE Intl. Conf. on Data Mining (ICDM 2026)*. [Under Review · CCF-B]
- [R3] (FA) **Md Imam Ahasan**, Guangchao Yang[†], A F M Abdun Noor, Mohammad Azam Khan[†]. “LightGAN-LD: A Lightweight Generative Adversarial Network for Efficient Low-Dose CT Reconstruction with Sinogram Encoding and Edge-Aware Learning.” *PeerJ Computer Science*. [Under Review · SCIE]
- [R4] (FA) **Md Imam Ahasan**, A F M Abdun Noor, Kah Ong Michael Goh[†], S M Hasan Mahmud[†]. “Toward Real-Time LDCT Reconstruction: A Sinogram-Encoded Lightweight GAN with Measurement-Domain Noise Suppression.” *Computers, Materials and Continua (CMC)*. [Under Review · SCIE]
- [R5] A F M Abdun Noor, **Md Imam Ahasan**, Kah Ong Michael Goh[†], S M Hasan Mahmud. “QBiLoF-U-Net: Bi-Context Location-Aware Feature Modeling for Joint Mammographic Segmentation and Classification.” *Computer Modeling in Engineering and Sciences (CMES)*. [Under Review · SCIE]

[R6] Md Mahfuzur Rahman, Pengzhan Zhou[†], A F M Abdun Noor, **Md Imam Ahasan**. “Adaptive Cross-Modal Fusion with Sparse Attention for Pedestrian Crossing Intention Prediction.” *PeerJ Computer Science*. [Under Review · SCIE]

Research Experience

Graduate Research Assistant – Computer Vision Lab

Chongqing University, China

Supervisor: Dr. Guangchao Yang, College of Computer Science

Sep 2023 – Jun 2026

- Designed **DACD**, a Poisson-thinning cold diffusion model with physics consistency achieving +1.20 dB PSNR over SOTA and 3.3× faster inference. [IJCNN 2026, CCF-C - Accepted]
- Extended to **GenDiff** with dose-anatomy encoding and structural prior refinement for zero-shot generalization across unseen dose levels and anatomical domains. [PeerJ CS, SCIE - Under Review]
- Developed **LightGAN-LD** and **Physics-Conditioned Bayesian Diffusion** model for real-time LDCT reconstruction in collaboration with Dr. Mohammad Azam Khan (KAIST). [BIBM 2026, CCF-B; PeerJ CS, SCIE - Under Review]

Graduate Research Assistant - Data Science Lab

Daffodil International University, Bangladesh

Supervisor: Dr. Md Zahid Hasan, Computer Science and Technology

Jun 2020 – Jul 2021

- Developed and benchmarked deep learning pipelines for retinal vessel segmentation and skin lesion classification across standard public datasets, building foundational expertise in medical image analysis.
- Co-developed **GeGLUNet**, a retinal vessel segmentation network via attention-gated GeGLU and contrastive supervision. [PRCV 2025, CCF-C - Published]

Teaching & Professional Experience

Lecturer, ICT: Anupama Intl. School and College

Dhaka, Bangladesh | Dec 2021 – Jun 2022

Senior IT Support Engineer: Surma Garments Ltd.

Dhaka, Bangladesh | Aug 2022 – Jun 2023

Awards & Honors

CQU Outstanding International Graduates 2026 Awarded to top 1% of international graduates Jun 2026
3rd Prize, “China in My Eyes” Photography Contest Oct 2024
Finalist, Joy Bangla Youth Award National recognition for social and community impact Aug 2021
Co-Founder, Shopner Khoje Foundation (*charitable organization*) Feb 2017 – Present

Technical Skills

Programming	Python
DL Frameworks	PyTorch (custom training loops, mixed precision, multi-GPU), MONAI, scikit-learn
Domain Expertise	Diffusion Models (cold diffusion, DDPM, score-based), GANs, Inverse Problems, CT/Sinogram Processing, Physics-Informed Deep Learning, Medical Image Segmentation, LDCT Reconstruction
Tools	Git, Linux, L ^A T _E X, Weights & Biases (W&B)

Academic Service

Peer Reviewer: *Engineering Applications of Artificial Intelligence* (EAAI), *Systems & Soft Computing*, *Journal of Agriculture and Food Research*, PRCV 2025, IJCNN 2026.

Conference Volunteer: 2018 ICPC Asia Dhaka Regional Contest; 6th Intl. Conf. on Electronic Engineering and Informatics 2024; IEEE Intl. Conf. on Electrical Energy Conversion Systems and Control 2025.

References

Dr. Guangchao Yang

College of Computer Science
 Chongqing University, Chongqing, China
gchao_yang@cqu.edu.cn | +86 15923504788

Dr. Mohammad Azam Khan

Kim Jaechul Graduate School of AI
 Korea Advanced Institute of Science and Technology
azamkhan@kaist.ac.kr