

# Md Imam Ahasan

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## Research Interests

- Medical Imaging and Computer Vision • Image Reconstruction and Enhancement • Generalizable Deep Learning • Computer-Aided Diagnosis • Trustworthy and Robust AI • Limited-Supervision Learning

## Education

### Chongqing University (CQU)

*M.Sc. in Computer Science*

GPA: 83.4 / 100

### Daffodil International University (DIU)

*B.Sc. in Computer Science and Engineering*

GPA: 71.5 / 100

**Chongqing, China**

Sep 2023 - Expected Jun 2026

**Dhaka, Bangladesh**

Sep 2017 – Sep 2021

## Publications

### Peer-Reviewed Conference Papers

- 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* - Conference on Pattern Recognition and Computer Vision (PRCV 2025). DOI: 10.1007/978-981-95-5631-1\_35

### Journal Articles (Under Review)

- **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.
- **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* - Scientific Reports (Nature Portfolio).

### Conference Papers (Under Review)

- **Md Imam Ahasan**, Guangchao Yang\*, A. F. M. Abdun Noor, Mohammad Azam Khan. *Physics-Conditioned Bayesian Diffusion Model for Low-Dose CT Reconstruction* - International Conference on Pattern Recognition (ICPR 2026).
- **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* - International Joint Conference on Neural Networks (IJCNN 2026).
- Anum Malik, A. F. M. Abdun Noor, **Md Imam Ahasan\***, Mahnoor Buriro. *MoSSGate: Memory-Modulated State-Space Gating for Efficient Skin Lesion Segmentation* - International Joint Conference on Neural Networks (IJCNN 2026).
- Ahtisham Waheed, Yunfei Yin\*, A. F. M. Abdun Noor, **Md Imam Ahasan**. *Direction-Curvature Aware Feature Integration for Robust Lane Detection* - International Joint Conference on Neural Networks (IJCNN 2026).
- 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* - International Joint Conference on Neural Networks (IJCNN 2026).

### Manuscript in Preparation

- A. F. M. Abdun Noor, **Md Imam Ahasan**, S. M. Hasan Mahmud\*. *A Joint Segmentation-Classification Framework for Mammography Using a Bi-Context Location-Aware U-Net* - Scientific Reports (Nature Portfolio).

## Research Experience

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### Lab Assistant, Computer Vision Lab

*Chongqing, China*

**Chongqing University**

*Sep 2024 – Present*

- Developed diffusion based frameworks for LDCT reconstruction, integrating physics guided constraints and forward operator consistency into generative models, and conducted large-scale evaluation on clinical and public datasets using quantitative metrics to improve reconstruction robustness and structural fidelity.

### Lab Assistant, Data Science Lab

*Dhaka, Bangladesh*

**Daffodil International University**

*Jun 2020 – Jul 2021*

- Implemented DL models for medical image classification and segmentation, building end-to-end experimental pipelines including preprocessing, training, hyperparameter tuning, and quantitative evaluation across multiple datasets.

## Technical Skills

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**Languages** Python

**Frameworks** PyTorch, MONAI, scikit-learn

**Computer Vision** Classification, segmentation, generative models, inverse problems

**Tools** Git, Linux, LaTeX, experiment tracking (W&B)

## Teaching & Professional Experience

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### Senior IT Support Engineer

*Dhaka, Bangladesh*

**Surma Garments Ltd.**

*Aug 2022 – Jun 2023*

### Lecturer, (ICT)

*Dhaka, Bangladesh*

**Anupama International School and College**

*Dec 2021 – Jun 2022*

## Awards, Leadership & Community

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**3<sup>rd</sup> Prize**, “China in My Eyes” Contest

*Oct 2024*

**Finalist**, Joy Bangla Youth Award

*Aug 2021*

Best Club Performance Award, Daffodil International University

*Feb 2019*

**Co-Founder**, Shopner Khoje Foundation (Charity Organization)

*Feb 2017 – Present*

**Joint Secretary**, DIU Voluntary Service Club

*Jan 2021 – Jun 2021*

**Executive Member**, DIU Computer and Programming Club

*Apr 2018 – Nov 2018*

## Service & Volunteering

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### Volunteer

*IEEE International Conference on Electrical Energy Conversion Systems and Control*

**Chongqing, China**

*May 2025*

### Volunteer

*6th International Conference on Electronic Engineering and Informatics*

**Chongqing, China**

*Jun 2024*

## References

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### Dr. Guangchao Yang

College of Computer Science

Chongqing University, Chongqing, China.

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### Dr. Mohammad Azam Khan

Kim Jaechul Graduate School of AI,

Korea Advanced Institute of Science and Technology.

Email: [azamkhan@kaist.ac.kr](mailto:azamkhan@kaist.ac.kr)