

# Kazi Reyazul Hasan

Dhaka, Bangladesh

✉ kazireyazulhasan@gmail.com • 🌐 kreyazulh.github.io • in kazireyazulhasan  
🔗 kreyazulh • 📞 0009-0007-9156-1565

## Research Focus

- Computer Vision
- Pattern Recognition
- Inclusive Technology
- Large Language Models

## Education

**Bangladesh University of Engineering and Technology**

*Bachelor of Science in Computer Science and Engineering*

**CGPA: 3.72/4.00**

Notable Courses: Data Structures and Algorithms, Database, Computer Architecture, Artificial Intelligence, Compiler, Computer Networks, Computer Security, Computer Graphics, Machine Learning

Thesis: *MediaPipe-Aided Ensemble Learning with Attention-Based Transformers for Word-Level Sign Language Recognition*

**Dhaka, Bangladesh**

*Feb 2020–Mar 2025*

## Work & Research Experience

**TigerIT Bangladesh Limited**

*Software Engineer, R&D (Full-time)*

**Dhaka, Bangladesh**

*Jul 2025–Present*

- Improved the core facial recognition benchmark performance by 3% in NIST FRTE evaluations through the development and integration of a custom loss function replacing AdaFace loss.
- Developing a scalable, high-accuracy deep learning-based iris pattern recognition system to replace the previous Hamming distance-based approach, current world rank 14 on IREX 10.

**Robofication LLC**

*Junior AI Engineer (Full-time/Remote)*

**Michigan, United States**

*Mar 2025–May 2025*

- Leading the design and implementation of a next-generation system modeler built on JointJS, FastAPI, and React within a 12-engineer team.
- Architecting and integrating advanced image and voice-processing pipelines for seamless multimodal sysml model creation.
- Developing LLM-based strategies for seamless export/import of artifacts between the company's AI toolchain and Cameo.
- Reporting daily progress to Dr. Md Tawhid Bin Waez, supporting sysML integration.

**Bangladesh University of Engineering and Technology**

*Undergraduate Research Assistant (Apprenticeship)*

**Dhaka, Bangladesh**

*Dec 2023–Mar 2025*

- Supervised by Dr. Muhammad Abdullah Adnan, focusing on advanced machine learning and deep learning applications.
- Led 2 key research projects, developing an inclusive language recognition system and an LLM-based multi-actor authentication system.
- Authored and submitted 4+ papers to top-tier conferences (ICASSP, ICPR, ACL, BMVC).
- Secured funding from 2 major sources (RISE BUET and the ICT Innovation Division), significantly boosting project resources.

## Publications

**[1]: EMPATH: MediaPipe-Aided Ensemble Learning with Attention-Based Transformers for Accurate Recognition of Bangla Word-Level Sign Language.**

Authors: **Kazi Reyazul Hasan** and Muhammad Abullah Andnan

*Oral Presentation* at International Conference on Pattern Recognition (ICPR 2024)

Publisher: Springer. Available here.

**[2]: Enhancing Word-Level Sign Language Recognition.**

Authors: **Kazi Reyazul Hasan** and Muhammad Abullah Andnan

*Oral Presentation* at Reproducible Research in Pattern Recognition (RRPR 2024)

Publisher: Springer. Available here.

## Grants & Awards

---

**Aug 2025:** "Signspeak" has been selected for BUET Incubator Program. My position: CEO.

**Sep 2024:** Research Grant, ICT Innovation Fund of Government of Bangladesh.

**Apr 2024:** Internal Research Grant, BUET Research and Innovation Centre for Science and Engineering (RISE).

**Mar 2023:** Best Project Award, CSE-316, BUET.

**Dec 2021:** 2nd Runner up, Banglalink Ennovators 5.0.

**Aug 2021:** Intern of the Month, Youth School for Social Entrepreneurs.

**Nov 2020:** Dean's List, BUET.

**May 2018:** National Winner (1st), Bangladesh Astronomy Olympiad.

## Featured Projects

---

**EMPATH:** *Tensorflow, Keras, Transformers, MediaPipe, OpenCV, Algorithms* — Code, Slide  
Developed a sign language recognition framework that exceeds previous accuracy benchmarks by 5–8%.

**Foodsie:** *Spring Boot, Thymeleaf, PostgreSQL, OpenAI, Google Vision API, Azure* — Demo  
Built a natural language-based restaurant search web application tailored to user preferences.

**Busbuddy:** *Node.js, Svelte, PostgreSQL, AWS* — Code  
Led the development of the BUET Bus Automation service admin interface.

**Derma:** *Scrapy, Scikit-learn, Streamlit, Google Image API* — Demo, Code, Dataset  
Scraped over 19k skincare product details and developed a search-based recommendation system.

**Race:** *C++, Arduino* — Code, Award  
Constructed a fully functional hardware racing game simulation with two custom-built cars.

## Extracurricular & Voluntary Experiences

---

- **Academic Team Member, Bangladesh Mathematical Olympiad (BAO)**  
Serving 5+ years, contributing to academic excellence and competitive success.
- **Leadership Roles**  
Held leadership positions such as Joint Secretary, Management Executive across multiple clubs and organizations.
- **National Winner & Competitor**  
Participated in olympiads, quizzes, and debate competitions from an early age, earning more than 50+ awards.

## Technical Skills

---

**Programming:** Python, C++, Java, Javascript, C#

**ML Frameworks:** Tensorflow, Keras, Pytorch, Transformers, OpenCV, Langchain, Embedding Models

**Database & Cloud:** PostgreSQL, Firebase, MS SQL Server, Azure, AWS, Faiss

**Web Technologies & Software:** React, Angular, Svelte, FastAPI, Node.js, Git, Ubuntu, Debian

## References

---

**Dr. Muhammad Abdullah Adnan:** Professor  
Department of Computer Science and Engineering,  
Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, Bangladesh  
Email: [abdullah.adnan@gmail.com](mailto:abdullah.adnan@gmail.com), [adnan@cse.buet.ac.bd](mailto:adnan@cse.buet.ac.bd)  
Phone: +880 1552 336926

**Nasir Uddin Ahmed:** Senior Vice President,  
TigerIT Bangladesh Limited, Dhaka, Bangladesh  
Email: [nasir@tigerit.com](mailto:nasir@tigerit.com)  
Phone: +880 1713 033924