



# SHAHANAZ AHMED NISHI

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## ACADEMIC PROFILE

Master's student in Computer Engineering at Erciyes University and recipient of the Turkish Government Scholarship. My research focuses on deep learning applications in computer vision, particularly post-earthquake damage detection using high-resolution remote sensing imagery and Explainable Artificial Intelligence (XAI). I aim to pursue doctoral research developing transparent and reliable AI systems for disaster resilience and societal impact.

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## RESEARCH INTERESTS

Artificial Intelligence, Deep Learning, Reinforcement Learning, Computer Vision, Remote Sensing Image Analysis, Explainable Artificial Intelligence (XAI), Post-Disaster Damage Assessment.

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## EDUCATION

### Master of Science in Computer Engineering

| 2024-Present

Erciyes University, Kayseri, Türkiye

CGPA: 4.00 / 4.00

**Thesis:** Post-Earthquake Damage Detection from High-Resolution Remote Sensing Images Using Deep Learning and Explainable Artificial Intelligence

### Bachelor of Science in Computer Science and Engineering

| 2018-2023

International Islamic University Chittagong

CGPA: 3.89 / 4.00

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## PUBLICATIONS

Chowdhury, J. I., Ahmed Nishi, S., Aymon, U., Ahsan, T., Chowdhury, S. A., & Patwary, M. J. A. (2025). An approach to ensure public safety using masked face recognition. In Proceedings of the 2nd International Conference on Big Data, IoT and Machine Learning (BIM 2023) by Taylor & Francis. <https://doi.org/10.1201/9781003605508-11>

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## RESEARCH EXPERIENCE

### Master's Thesis: Explainable Deep Learning for Post-Earthquake Building Damage

**Assessment** Erciyes University | 2024 - Present

- Designing a semantic segmentation framework for automated post-earthquake building damage assessment using high-resolution satellite imagery.
- Leveraging datasets provided by Maxar Technologies to classify damaged and undamaged structures at pixel level.
- Implementing and comparing CNN-based architectures (U-Net variants) and Vision Transformer models for robust feature extraction and spatial reasoning.
- Integrating Explainable AI (XAI) techniques, including Grad-CAM and attention-based visualization, to analyze model decision mechanisms and improve interpretability.
- Evaluating model performance using segmentation metrics (IoU, Dice coefficient, precision/recall) to ensure reliability for real-world disaster response applications.
- Aiming to develop a transparent and scalable AI framework to support emergency response planning and policy decision-making in earthquake-prone regions.

## WORK EXPERIENCE

### Teaching assistant

| 2022 - 2023

International Islamic University Chittagong

- Assisted in undergraduate laboratory sessions and programming courses.
- Provided academic support and mentoring to students in data structures and algorithm related coursework.
- Evaluated assignments and supported faculty members in course coordination.

### Job Placement Executive

| June, 2023 - November, 2023

Programming Hero| Remote

- Guided students in technical skill development and career preparation.
- Conducted mock interviews and resume review sessions.
- Coordinated with hiring partners to support graduate placement initiatives.

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## TECHNICAL SKILLS

**Programming:** Python, C, C++

**AI & Data Science:** PyTorch, Deep Learning, Computer Vision

**Web Technologies:** HTML, CSS, JavaScript, React, Node.js

**Tools:** Git, Google Colab, VS Code, CVAT

**Databases:** MongoDB, Firebase.

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## PROJECTS

[Dreamers University \(Team Project\)](#) | [Live Website Link](#) | [GitHub Client Site Link](#) | [GitHub Server Link](#)

Developed a multi-role university management platform using Next.js, Node.js, and MongoDB. Contributed to frontend and backend implementation including authentication and role-based dashboards.

- It was a group project of six members where I worked on both the front-end and back-end parts using a new technology, Next js.
- I have also used Messenger Chatbox which will be shown on the homepage.

**Technologies:** HTML, CSS, Tailwind, Next.js, Node.js, Express.js, Firebase, MongoDB, Vercel

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## LEADERSHIP & EXTRACURRICULAR ACTIVITIES

### General Secretary

International Islamic University Chittagong - Computer Club

| 2021 - 2023

- Led planning and execution of major academic and technical events including programming contests, bootcamps, university festivals, and departmental study tours.
- Coordinated intra-university programming competitions and alumni-led career guidance webinars.
- Managed event logistics, team coordination, sponsorship communication, and participant engagement.
- Contributed to organizing CSE FESTs and multiple annual departmental ceremonies.

### Volunteering & Social Engagement

- Participant, Sosyal Girişimcilik ve Gönüllülük Çalışmaları (2025) - Yurtdışı Türkler ve Akraba Topluluklar Başkanlığı
- Volunteer, 3rd International Conference on Innovations in Science, Engineering and Technology (ICISSET 2022)
- Volunteer, 5th Convocation Ceremony - International Islamic University Chittagong
- Volunteer, Fight Against Winter Campaign (2022)
- Volunteer, CSE Fest 2022

## **CERTIFICATIONS & PROFESSIONAL DEVELOPMENT**

- Acil Durum Eylemleri ve Doğada Hayatta Kalma - Yurtdışı Türkler ve Akraba Topluluklar Başkanlığı
  - Sosyal Girişimcilik ve Gönüllülük Çalışmaları - Yurtdışı Türkler ve Akraba Topluluklar Başkanlığı
  - Complete Web Development - Programming Hero
  - Endgame Course - Programming Hero
  - Skill Development for Mobile Game & Application - ICT Division (2022)
  - Participant, IIUC Inter-University Hackathon (2020)
  - Participant, Grace Hopper Girls' Programming Camp
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## **LANGUAGE SKILLS**

Bangla (Native) | English (B2) | Turkish (C1 – Certified) | Hindi & Urdu (Conversational)

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## **REFERENCE**

FEHİM KÖYLÜ

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