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.

RESEARCH INTERESTS

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

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

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

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.

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.

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 (ICISET 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

LANGUAGE SKILLS

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

REFERENCE

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