

Sheikh Tanvir Ahmed

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EDUCATION

United International University

Bachelor of Computer Science and Engineering

CGPA: 3.99/4.00 (After 3.5 Years)

Relevant Coursework: Data Structure & Algorithms, Artificial Intelligence, Machine Learning, System Analysis And Design, Database Management System, Web Programming, Software Engineering

Dhaka, Bangladesh

Oct 2022 - Present

WORK EXPERIENCE

Research Intern

Feb 2026 – Present

Remote

CRISiS Lab, Joint Centre for Disaster Research (JCDR)

Massey University, New Zealand

- Working under **Dr. Catalina Miranda** (Lecturer, JCDR, Massey University) on numerical modelling of timber connectors for disaster resilience research.
- Performing numerical modelling of timber connectors for structural disaster resilience research.
- Building and annotating sensor/digital datasets to support ML workflows in hazard analysis.
- Developing computational models and data pipelines for analyzing disaster risk communication.

Undergraduate Teaching Assistant

Nov 2024 – Present

Dhaka, Bangladesh

United International University

- Assist faculty in ensuring smooth class operations.
- Support students with course-related issues.
- Assess students based on their assignments and tasks.

Undergraduate Grader

Oct 2023 – Jan 2024

Dhaka, Bangladesh

United International University

- Assessing students based on their assignments.

PROJECTS

Autonomous Car Parking System [[GitHub](#)]

- Built a **reinforcement learning-based** self-driving car simulation in Unity and deployed it to a real-world Arduino vehicle via custom REST APIs
- Trained an RL agent to perform autonomous parking tasks
- Awarded **3rd runner-up** among 100+ teams at UIU Project Show, Summer 2024

OptiTask - Personal Management System [[GitHub](#)]

- Developed a task automation and emotion-aware productivity app with group chat, smart task assignment, and AI-driven support
- Integrated a ChatBot using the **Gemini API** with **Stanford NLP** for user emotion analysis and personalized responses;
- Won **1st place (Poster Category)** out of 150+ teams at UTU Fall Project Show 2024

VoteChain - Blockchain Based Voting System [[GitHub](#)]

- Building a decentralized voting platform with wallet authentication, real-time voting logic, and secure smart contract execution
- Using React, Next.js, TypeScript, and Solidity with MetaMask and custom APIs to handle the voting structure

EngReji - AI Powered Learning Platform [[GitHub](#)] [[Live Demo](#)]

- Developed a learning platform that empowers rural Bangladeshi students to improve spoken English through real-time AI feedback on pronunciation and fluency
- Designed the frontend with TypeScript & Tailwind CSS and built a scalable Python backend integrated with advanced open-source AI models and APIs for speech analysis
- Performed functionality and regression testing during development to ensure consistent performance across modules.
- Achieved **National** and **International** recognition: **Finalist** in Bangladesh Blockchain Olympiad 2025 (AI Category), as well as **Honorable Mention**, and **shortlisted** at **JavaAIFest** (powered by **TherapBD**)

ACTIVITIES

- Solved **hundreds of algorithmic problems** across different online judges (LeetCode, Codeforces, AtCoder)
- Accepted into **IBM's Qiskit Advocate Program** to actively contribute to and expand my expertise in quantum computing.
- Got nominated to represent **Bangladesh** on **IDSOL (International Data Science Olympiad) 2025**
- Participated in **UPC (University Physics Competition) 2025**
- Represented UIU in the **CSE Fest 2025 Inter-University Programming Contest (IUPC)**
- Mentor junior students on core CS topics, including DSA, algorithms, and machine learning
- Active in research on Large Language Models (LLMs) and deep learning, exploring their application in automation and AI tools
- Enthusiast of real-world AI, NLP, and deep learning systems, regularly experiments with projects involving GPT, Gemini, and Stanford NLP

ADDITIONAL

Technical Skills:

- **Programming:** C, C++, Go, Python, Java, MASM, TypeScript, JavaScript
- **Web & Full Stack:** React, Next.js, Tailwind CSS, Node.js, HTML, CSS, Figma, SQL, Git
- **Software Testing:** Manual Testing, SDLC, STLC, Test Case Design, Bug Reporting (Jira)
- **Blockchain & Smart Contracts:** Solidity, MetaMask, Web3.js
- **AI/ML & Tools:** Scikit-learn, TensorFlow, Gemini API, Stanford NLP, OpenAI APIs
- **Concepts:** Retrieval Augmented Generation (RAG), Data Structures & Algorithms, Machine Learning, Deep Learning, API Integration, CRM Logic, Automation Workflows

Languages: Bengali (Native), English (Efficient)

Awards:

- **Talentpool Scholarship** based on the board result
- **Merit-based scholarships in all undergrad trimesters (10x)** from **United International University**
- **3rd Runner-Up**, UIU CSE Project Show (Summer 2024) – Autonomous Car Parking System
- **Champion**, Poster Category, UIU CSE Project Show (Fall 2024) – Personal Management System
- **Finalist & Honourable Mention**, AI Category, **Bangladesh Blockchain Olympiad 2025**
- **Bronze Medalist - University Physics Competition 2025**