# Tanvir Mahmud

Section 2009 Secti

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### Skills

Languages: Python, C/C++, Java, JavaScript

**Backend & Frameworks:** FastAPI, SQLAlchemy, SQLite, REST API Development, Object-Oriented Programming (OOP) **Technologies:** Git, GitHub, MySQL, Data Structures & Algorithms

Additional: Technical Writing, Adobe Photoshop, Adobe Premiere Pro, Canva, and Figma

Work Experience	
Independent University, Bangladesh	Jan 2023 - Present
Undergraduate Teaching Assistant	
<ul> <li>Teach Introduction to Computer Programming (Python) and Algorithms</li> <li>Assist students with programming concepts and algorithm implementation</li> </ul>	
Microsoft	Sep 2023 - Present
Beta Microsoft Learn Student Ambassador	
<ul> <li>Host Cloud Skills challenges on the Microsoft Learn platform</li> <li>Conduct sessions on Azure, GitHub and other Microsoft technologies.</li> </ul>	
Freelance	2022 – Present
IELTS Tutor	
<ul> <li>Provide personalized IELTS preparation for speaking, writing, reading, and listening modules</li> <li>Develop customized study plans tailored to student needs and target scores</li> <li>Conduct mock tests and give detailed performance feedback</li> <li>Help students achieve desired band scores for university and immigration goals</li> </ul>	
Education	

Independent University, Bangladesh	Expected Aug 2026
B.Sc. in Computer Science and Engineering	CGPA: 3.81/4.0
Minor in Robotics and Intelligent Machine	
Relevant Coursework: Numerical Methods, Machine Learning, Artific	ial Intelligence, Image Processing, Robotics, Data
Structures, Algorithms, OOP	

## Projects

#### Al-Powered Python Tutor

#### Full Stack Developer

- · Implemented speech-to-text and text-to-speech features using Web Speech API for seamless voice conversations
- · Built RESTful APIs with FastAPI backend and integrated Google Gemini AI for intelligent tutoring responses
- · Created responsive React frontend with continuous conversation mode and auto-speech functionality
- Tech Stack: React, ShadcnUI, FastAPI, Python, Google Gemini AI, SQLite, Web Speech API, Tailwind CSS, JWT

#### Demand and Supply Analysis for Agricultural Products

#### Team Leader and Full Stack Developer

- Developed agricultural analytics platform for tracking demand and supply in Bangladesh
- · Built real-time market analysis dashboard with price forecasting
- Tech Stack: React Router, ShadcnUI, MySQL, PHP, Next.js

# Awards and Achievements

- NASA Space Apps Challenge 2024: 1st Runner-up and Global Nominee
- ICPC Dhaka Regional 2024: Finalist
- National Collegiate Programming 2023: Finalist
- Inter University Programming Contests: Finalist in SUST IUPC 2023, IUT IUPC 2023, UIU IUPC 2024
- Algorithm Designing Contest, TechFest: 1st Runner-up
- UIU Inter University Blockchain Olympiad: Finalist
- 5th International Robo Tech Olympiad: 1st Runner-up
- KUET Bitfest Datathon 2024: Ranked 47th/108 (Individual)
- National Data Analytics Competition (NDAC-2025): Finalist
- ICT Olympiad 2024: Semi-Finalist
- Intra IUB Programming Contest: Champion (Junior), 5th Overall