

TANVIR HASAN ABIR

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

EDUCATION

Bachelor of Science in Software Engineering (Expected Graduation: December 2025)

Institute of Information Technology (IIT)

University of Dhaka

Higher Secondary School Certificate (2018 - 2020)

Govt. Science College - Dhaka

SKILLS

- Programming Language:** C, C++, Java, JavaScript, Python, SQL
- Web Development:** MERN Stack (MongoDB, Express.js, React, Node.js), Tailwind CSS
- Tools:** Selenium, Maven, Postman, Docker, GitHub, PostgreSQL, Oracle
- Others:** UI/UX Design (Figma), Linux

PROJECTS

TripMinds ([GitHub Link](#))

MERN Stack (MongoDB, Express.js, React, Node.js), FastAPI

- Created an AI-powered travel platform to automate itinerary generation, budgeting, and weather updates. Integrated features like map navigation, image search, and personalized trip blogs to enhance the experience.

Stack-OverFlow2.0 ([GitHub Link](#))

React.js, Express.js, MongoDB, MinIO, Docker, Nginx

- Developed a Stack Overflow-like web app with user authentication, post creation, and notifications. Refactored into microservices to enhance scalability and modularity.

EcoSync ([GitHub Link](#))

MERN Stack (MongoDB, Express.js, React, Node.js)

- Developed a waste management platform for Dhaka North City Corporation (**DNCC**) as part of the **Code Samurai 2024** competition, improving urban sustainability and operational efficiency.

Mini-Chess ([GitHub Link](#))

Express.js, React.js, Tailwind CSS

- Developed an AI for a simplified 6x5 chess game using Minimax with alpha-beta pruning. Created an intuitive interface with an evaluation function to optimize decision-making.

IIT Routine & Lab Management System ([GitHub Link](#))

MERN Stack (MongoDB, Express.js, React, Node.js)

- Developed a resource optimization system to manage classrooms, labs, and schedules at the University of Dhaka's IIT, improving facility utilization and reducing scheduling conflicts.

Project CoolCity ([DevPost Link](#))

MERN Stack (MongoDB, Express, React, Node.js)

- Created an AI solution to reduce urban temperatures by optimizing green spaces and urban planning, with a Gemini-powered ChatBot for real-time answers. Integrated environmental data to generate actionable solutions, improving livability and reducing heat islands.

City Garden ([Prototype Link](#))

Figma

- Designed a mobile app for **GreenScape** to empower urban gardening, featuring personalized planting calendars, AI assistant, community sharing, and AR tours. Focused on accessibility and adaptive UI for a seamless user experience.

ACHIEVEMENTS

- **Pupil at Codeforces** (max ratings: 1200+)
- **2*** at **CodeChef** (max ratings: 1400+)
- Successfully solved **450+** problems on platforms including **Codeforces**, **CodeChef**, **HackerEarth**, **LeetCode**, and **GeeksforGeeks**, enhancing skills in algorithms and data structures.
- **Top 10 Finalist** at **BUET CSE Fest 2024** in the **AI & API Hackathon** segment.
- Awarded the **Winner** category at the **AI for Change Hackathon**.
- Shortlisted among the top 507 candidates out of 2,521 in the **Geeky Solutions Learnathon 3.0**.

WORK EXPERIENCE

- **Organizing Secretary** at IIT Software Engineers' Community (**IITSEC**)
- Volunteered at **ITverse 2023**, led a team to organize tech events, workshops, and hackathons for **200+** participants.
- Volunteered at 'বইমেলা কম্পাস', assisting with data collection for an app that helps users navigate the Ekushey Book Fair, providing info on stalls, books, and essential services using Google Maps.

REFERENCE

Dr. Ahmedul Kabir

Associate Professor, IIT, University of Dhaka

Research Lead, BARTA Research Group

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