

# TANVIR HASAN ABIR

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

## EDUCATION

**Bachelor of Science in Software Engineering** (Expected: 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)
- **Tools:** Selenium, Maven, Postman, Docker, GitHub
- **Others:** UI/UX Design (Figma), Linux

## PROJECTS

### TripMinds ([GitHub Link](#))

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

- Engineered an AI-powered platform that generates personalized travel itineraries with integrated weather updates and smart image search for enhanced user experience.

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

React.js, Express.js, MongoDB, MinIO

- 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)

- Collaborated with a team to develop an AI-driven solution to mitigate rising urban temperatures caused by climate change, delivering innovative features under a 48-hour deadline

### Derivative Calculator ([GitHub Link](#))

C++

- Built a mathematical tool using C++ that parses expressions and applies differentiation rules to calculate derivatives efficiently.

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

- Competitive Programming:** **Pupil** at **Codeforces** (max ratings: 1200+)
- 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.
- Won the **Winner** category at the **AI for Change Hackathon**.

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 in organizing activities.

REFERENCE

**Dr. Ahmedul Kabir**

Associate Professor, IIT, University of Dhaka

Research Lead, BARTA Research Group

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