

Tanvir Rahman Rafi

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Career Objective

Aspiring researcher and full-stack web developer with a B.Sc. in Computer Science and Engineering. Specialized in **web security, web development, and databases (SQL/NoSQL)**. Published academic research in web security and eager to contribute to advanced research projects in cybersecurity, databases, and educational technology. Strong problem-solving skills, quick learner, and passionate about combining academic theory with practical implementation.

Education

Mawlana Bhashani Science and Technology University

Bangladesh

BSc (Engg.) in Computer Science and Engineering

2020–2024

CGPA: 3.26/4.00

Thesis: *WebGuard: Enhancing Web Security Through an Integrated Developer Platform*

- Developed a cybersecurity platform covering SQL Injection, XSS, phishing, and malware.
- Designed interactive tutorials and simulations to improve web security education.
- Accepted for publication in *International Academic Press (IAPress)*, 2024.

Technical Skills

Programming: Python, Java, JavaScript, C, C++

Web Development: React, HTML, CSS, Tailwind, Bootstrap, Sass, jQuery

Backend: Django, Node.js, Express.js

Databases: SQL (MySQL, PostgreSQL), NoSQL (MongoDB)

Data Tools: Pandas, NumPy, Scikit-learn, Matplotlib, Jupyter Notebook

Version Control: Git, GitHub

Research Interests: Web Security, Cybersecurity Education, Databases, Full-Stack Development, Machine Learning

Research Experience

MBSTU

Bangladesh

Undergraduate Researcher

2023–2024

- Conducted research on common web application vulnerabilities and mitigation strategies.
- Developed **WebGuard**, an educational cybersecurity research platform.
- Implemented live attack environments with real-time feedback and countermeasures.
- Publication resulted from this research (*IAPress*, 2024).

Independent Study Projects

2022

- Conducted personal experiments on secure coding practices in **MERN stack**.
- Explored **machine learning models** using Scikit-learn, NumPy, and Pandas for classification problems.
- Wrote research notes on improving accessibility in **mobile learning apps**.

Publications

2024: **WebGuard: Enhancing Web Security Through an Integrated Developer Platform**. Published in *International Academic Press (IAPress)*. Available online: <http://www.iapress.org/index.php/soic/article/view/2457>

In Preparation: Exploring the Role of Educational Platforms in Cybersecurity Training (Drafting for future submission).

Projects

WebGuards – Cybersecurity Research Platform (Live | GitHub)

- React, Node.js, MongoDB, Express.js based educational cybersecurity platform.

- Simulates SQL Injection, XSS, phishing, and malware attacks with tutorials.
- Published as part of academic research in *IApress*, 2024.

ExpressoCoffee – Online Coffee Store (Live | GitHub)

- MERN Stack project for managing coffee items with CRUD operations.
- Integrated Firebase authentication for secure user management.
- Focused on elegant UI, responsive layout, and intuitive navigation.

Dragon News – News Portal Platform (Live | GitHub)

- Built with React, Firebase, and Bootstrap for responsive design.
- Features category-wise news routing and secure login system.
- Demonstrates strong UI/UX and modular front-end structure.

Easy Learn – Android Learning App (GitHub)

- Android app developed with Java and Firebase.
- Offers structured lessons, quizzes, and progress tracking.
- Promotes accessible mobile learning experience.

Coding Profiles

Codeforces: <https://codeforces.com/profile/Tanvir19026>

HackerRank: <https://www.hackerrank.com/profile/tanvirrafi1999>

Teaching & Mentoring

Helped classmates and juniors understand programming concepts (Python, JavaScript, SQL).

Conducted peer study groups on database design and web security basics.

Created small tutorials on Git/GitHub workflows and responsive design.

Conferences & Workshops

2024: Presented research project *WebGuard* at International Academic Press event.

2023: Attended workshop on **Cybersecurity Awareness and Secure Coding**, Dhaka.

2022: Participated in hackathon organized by Programming Hero (team project on MERN stack).

Certifications

Web Development – Programming Hero (2022)

Android Development – MSB Academy (2021)

Completed multiple online MOOCs (Coursera, edX) in Data Science and Cybersecurity.

Languages

Bengali: Native

English: Fluent — IELTS Overall 6.0 (R5.5, L6.0, W6.5, S6.5)

Extracurricular & Leadership

Volunteered in university programming club activities.

Mentored juniors in preparing for coding competitions.

Collaborated on open-source projects shared on GitHub.