

# Tasnimul Hasnat

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## About Me

I'm a final semester undergraduate student with a keen interest in open-source projects. I actively seek out opportunities to learn and grow, specially within collaborative team environments where I can contribute to technological innovations. Adept at bug hunting and vulnerability detection, I excel at performing under tight deadlines and pressure.

## Education

### Islamic University of Technology

CGPA: 3.77 out of 4.00 | Position: 19<sup>th</sup>

B.Sc in Computer Science & Engineering

Jan 2020 - Present

### Dhaka Residential Model College

GPA: 5.00 out of 5.00

Higher Secondary Certificate

2017 - 2019

### Dhaka Residential Model College

GPA: 5.00 out of 5.00

Secondary School Certificate

2015 - 2017

## Research Experience

### Binary Function Clone Detection Using MBA Simplification

Ongoing

- Proposed a novel approach to binary function clone detection utilizing MBA (Mathematical Boolean Arithmetic) simplification.
- Trying to employ dynamic symbolic execution to coalesce assembly instructions into mathematical expressions.
- Conducting benchmark study against other methods of binary clone detection to evaluate the performance of the proposed model.

## Work Experience

### Beetles Cyber Security Ltd.

PenTest Intern

- Became familiarized with vulnerability assessment and malware development.

## Projects

### Abaash

orkhasnat/Abaash

EJS, ExpressJs, MariaDB, Bulma

A web-based platform that simplifies the process of finding and renting flats for non-residential IUT students. It offers a user-friendly interface for flat owners and tenants, while providing students with a one-stop solution for accommodation and dining needs, including the management of cafeteria coupons.

### Broke\_No\_More

orkhasnat/Broke\_No\_More

Python, Keras, Pandas

Developed a deep learning model to forecast stock price movements in the Dhaka Stock Exchange, enhancing investment decision-making with accurate predictions. Employed a comprehensive methodology, encompassing data acquisition, pre-processing techniques, and proposed a RNN-LSTM forecasting model.

### Fox's Tale

orkhasnat/Foxs-Tale

C++, SFML

A modern tribute to the classic Rapid Roll game, created using the SFML library. It adds new features such as updated graphics, sound effects, obstacles, power-ups, and achievements to the original game. Nostalgic fan or a new player, it provides an engaging gaming experience that tests your reflexes, agility, and strategic thinking.

### Sanctuary

orkhasnat/Sanctuary

Java, JavaFX, FXML, MariaDB

A user-friendly application built with JavaFX, designed to simplify the process of finding and renting flats for IUT students. It offers students the ability to find flats based on their preferences, and allows flat owners to easily manage their properties and tenants.

### Outbreak

orkhasnat/Outbreak

C++, SFML

Outbreak is a viral simulator developed in C++ and SFML. It models the spread of viruses based on parameters such as transmission rate, mortality rate, and incubation period. Users can manipulate these parameters to see how they affect the spread of the virus.

### ISC-BD

orkhasnat/ISC-BD

Astro, TypeScript, Tailwind

Developed a comprehensive full-stack portfolio website for a non-profit NGO. Managed the entire development lifecycle, from initial conceptualization to deployment.

## Skills

### Programming Languages

C, C++, Java, Go, Python, JavaScript, SQL, x86 Assembly

### Libraries & Frameworks

Astro, React, Tailwind, SFML, ExpressJS, Pandas, Keras

### Other Tools

Git, Bash, Linux, Docker, Excel, Burp Suite, UML, LaTeX

### Database

Oracle, MySQL, MariaDB

## Co-Curriculars

Member of IUT Genesis, team ranked 1<sup>st</sup> in CTFtime in Bangladesh (2023).

Organizer and Problem Setter of IUT 11<sup>th</sup> National ICT Fest 2024.

- 🏆 Problem Setter at KnightCTF 2023.
- 🏆 Organizer and Problem Setter of Intra IUT Coderush Competition 2023.
- 🏆 Volunteer at Intra IUT Hackathon Competition 2023.
- 🏆 Instructor at IUT CTF Club.
- 🏆 Participated in various national and international CTF (Capture the Flag) competitions since 2022.

## Achievements

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- 🏆 **BUET CSE Fest CTF 2023**  
Champion among 100+ teams.
- 🏆 **DU Cefalo ITVerse CTF 2023**  
4<sup>th</sup> among 60+ teams.
- 🏆 **RITSEC International CTF 2023**  
7<sup>th</sup> among 710+ *international* teams.
- 🏆 **SUST SWE Technovent CTF 2023**  
6<sup>th</sup> among 40+ teams.
- 🏆 **RIOT Flaghunt CTF 2022**  
8<sup>th</sup> among 80+ teams.
- 🏆 **Awarded IUT-OIC Partial Scholarship**  
Ranked 195<sup>th</sup> amongst 4200+ participants.  
Scholarship awarded for 3 Years equivalent to **\$13500**.

## Reference

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### Dr. Md Moniruzzaman

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Computer Science and Engineering Department  
Islamic University of Technology

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