Tasnimul **Hasnat**

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About Me

I'm a recent graduate with a passion for technology and a strong interest in open-source development. I flourish in collaborative environments, actively seeking opportunities to learn and grow while excelling under pressure and tight deadlines. Eager to apply my skills and enthusiasm to contribute meaningfully to innovative projects aimed at the betterment of society.

Education

Islamic University of Technology　　　　　　　　　　　*B.Sc in Computer Science & Engineering*
CGPA: 3.77 out of 4.00　　　　　　　　　　　　　　　　　　　　　　　　*Jan 2020 - Present*

Dhaka Residential Model College　　　　　　　　　　　　　*Higher Secondary Certificate*
GPA: 5.00 out of 5.00　　　　　　　　　　　　　　　　　　　　　　　　　　　*2017 - 2019*

Dhaka Residential Model College　　　　　　　　　　　　　*Secondary School Certificate*
GPA: 5.00 out of 5.00　　　　　　　　　　　　　　　　　　　　　　　　　　　*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.

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.

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.

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 **1st** in *CTFtime* in Bangladesh (2023).
- Organizer and Problem Setter of IUT 11th 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

🏆 **BUET CSE Fest CTF 2023**
  Champion among 100+ teams.

🏆 **DU Cefalo ITVerse CTF 2023**
  4th among 60+ teams.

🏆 **RITSEC International CTF 2023**
  7th among 710+ *international* teams.

🏆 **SUST SWE Technovent CTF 2023**
  6th among 40+ teams.

🏆 **RIOT Flaghunt CTF 2022**
  8th among 80+ teams.

🏆 **Awarded IUT-OIC Partial Scholarship**
  Ranked **195th** amongst 4200+ participants.
  Scholarship awarded for 3 Years equivalent to **$13500**.

Reference

Dr. Md Moniruzzaman ✉ *milton@iut-dhaka.edu*

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