

TANISHA TASNIN

45 Longwood Road North, Hamilton, ON L8S 3V2

☎ 647-222-3048

✉ tanisha.tasnin03@gmail.com

🌐 [linkedin.com/in/tanishataasnin](https://www.linkedin.com/in/tanishataasnin)

🐙 github.com/tasnint

<https://tasnint.github.io/portfolio-website/>

Education

McMaster University

Sep. 2022 – May 2027

Bachelor of Engineering in Biomedical and Software Engineering

Hamilton, Ontario

- McMaster University Award of Excellence, Fall 2022; Deans' Honour List, Winter 2023;

Relevant Coursework

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|----------------------------------|------------------|---|--|
| • Data Structures and Algorithms | • Java
• UNIX | • Computer Architecture
• C and Bash Scripting | • Genetic Engineering
• Laboratory Experience |
|----------------------------------|------------------|---|--|

Experience

Battery Workforce Challenge

October 2023 – present

Algorithms Sub Team

McMaster University

- Developed algorithms for precise estimation of battery feature statuses using Git workflow for documentation and collaboration.
- Designed and executed test cases using MATLAB and Simulink, analyzed data, and prepared reports for insights.

McMaster ECOCAR

September 2022 – April 2023

Connected and Automated Vehicles (CAVs) Team

McMaster University

- Gained proficiency in running vehicle simulations through diverse software platforms, enhancing my understanding of automated vehicle dynamics.
- Analyzed and incorporated sensor data in simulated model vehicle test cases, focusing on optimizing vehicle responsiveness to road conditions.

Awareness 360

2021 – 2022

Staff Member

Dhaka, Bangladesh

- Mentored and supervised interns, overseeing task delegation, and compiled performance reports to assess and enhance intern development.
- Contributed to UN SDG projects and hosted live sessions with global figures, enhancing audience engagement and supporting global initiatives.

Projects

MyHealth Application | *UI/UX, React Native, JavaScript, Node.js, Firebase, Android Studio*

In progress

- A cross-platform menstrual and sexual health tracking application hosted via Android Studio featuring cycle logging, ovulation estimation and educational and local resources on contraceptives and pregnancy.
- Implements React Native for the UI, JavaScript for dynamic features such as cycle logging, Node.js for server-side functions and Firebase for secure and efficient management of user profiles and menstrual cycle data.

Password Resilience Analyzer | *C, CMD*

December 2023

- C program featuring a user-friendly menu that assesses the user's password strength.
- Categorizes passwords as "weak", "moderate", or "strong" based on criteria such as the inclusion of lowercase and uppercase letters, special characters, digits, and password length.
- Implemented via the Command Line Interface.

Stovetop Defendoor | *Raspberry Pi, Python, Autodesk Inventor, 3D Printing*

January-February 2023

- A proactive design engineered to reduce burn injuries due to stovetops in children.
- Force-sensitive sensors programmed using Python and implemented using a Raspberry-Pi interface activate a barrier and alarm upon detection of children within the stovetop's proximity
- Barrier raising mechanical system was modelled using Autodesk Inventor and 3D printed to construct a medium-fidelity prototype

Technical Skills

Languages: Python, Java, C, HTML/CSS, JavaScript, React Native, React, Node.js

Developer Tools: VS Code, Firebase, Android Studio, Makefile, Canva, Figma

Technologies/Frameworks: Linux, GitHub, MATLAB, Simulink, AutoDesk Inventor