Safia Ahmed

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RELEVANT SKILLS

- **Languages:** Python, JavaScript, SQL, C++, C, VHDL, HTML, CSS
- **Tools:** AWS, MySQL, Splunk, Arduino, LTSpice, Intel Quartus, MongoDB, JIRA, Git, GitLab, Linux
- **Frameworks/Libraries:** Spark, Numpy, Pandas, Angular, React, REST API
- Proficiency with soldering, PCB assembly, and analog & digital circuits

EDUCATION

B.A.Sc, Computer Engineering, University of Waterloo   Sep 2020 - Present

Relevant Courses: Data Structures and Algorithms (C++), Database Systems, Compilers, Operating Systems (C)

EXPERIENCE

Data Engineering Coop Rogers Communications   Jan 2023 - Apr 2023

- **Developed automated lists** using **SQL** eliminating the need for manual data extraction **improving efficiency by 17%.**
- Analyzed and **processed large-scale datasets** using big data technologies such as Spark in **Microsoft Azure**.
- Designed and developed dashboards that improved data accessibility and decision-making processes.
- **Defined** clear objectives, success criteria, and a detailed project plan for a Proof of Concept (POC) using complex SQL queries to extract, transform, and analyze data. The POC had an **86% success rate**.

Hardware Engineering Coop, Armstrong Monitoring   May 2022 - Aug 2022

- **Debugged PCB boards** using schematics and theoretical circuit knowledge
- **Authorized** test procedures for new products by **analyzing schematics** and writing safety procedures
- Tested products using equipment such as **DMM, oscilloscopes, power supplies**, and **soldered** resistors, capacitors, and through-hole and surface mount components

Electrical Engineering Intern, Rogers Communications   Sep 2021 - Dec 2021

- **Assisted in RF design** of new and existing cell sites as per planning specification and creating radio **schematic diagrams** to upgrade antenna systems
- **Provided documentation** support for **RF designs, Safety Code 6 submissions,** and engineering documentations as required by radio network design

PROJECTS

Real Time Operating System | C, Intel DE1-SoC board, ARM DS IDE

- Implemented memory management support within the kernel, utilizing the first-fit memory allocation algorithm and designed kernel support for scheduling tasks based on priority and task preemption.
- Developed a mailbox API to facilitate communication between tasks within the system.

Stem Kids | React Native, Expo-cli

- **Won Best Overall & Most Voted Project** at the Women in Engineering Hackathon hosted by UWaterloo
- Constructed a mobile app with science based games to introduce young children to simple engineering concepts. The project was created using expo icons, buttons, and modals.

Other Projects: React app focused on Menstrual Equity: won Women Empowerment Award at Technova Hackathon