SAGARIKA RABINDRANATH

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WORK EXPERIENCE

Amazon Robotics | Software Development Engineer Co-op May 2023 – Jul 2024

- Developed a software application with **React** and **Java** with an Amazon-owned SDK to simplify the calibration process of Captron buttons in robotic workcells at Amazon FCs, achieving a **35% reduction** in workcell setup time for customers
- Created a configurable **Java-based** backend package template to expedite package creation for customers, including example workflows showcasing the interplay among SDK, backend, and frontend components
- Developed a **Kotlin** microservice for seamless projector integration, optimizing energy usage across **50,000** robotic workcells.This adjustment of laser state during idle periods will enhance cost efficiency, contributing to annual energy savings of **US $1.3 million**
- Developed a **Kotlin** microservice template streamlining customer onboarding and facilitating the creation of customized microservices, resulting in significant time savings for developers and customers

Royal Bank of Canada | Developer Intern May 2022 – Aug 2022

- Lead developer for talent management web app using **Django** and **React** to streamline the internal recruitment process, allowing recruiting team to analyze potential talent **30% faster**
- Effectively collaborated in a cross-functional team to scope web app and define business/development requirements by prototyping and using gap analysis
- Fine-tuned database design to optimize app performance and adaptability

OTHER RELEVANT EXPERIENCES

GIS Mapping Software | Path Finding Project Jan 2022 - May 2022

- Developed a mapping software using **C++ STL** and OpenStreetMap database
- Implemented Dijkstra, greedy and simulated annealing algorithms to optimize the shortest path for the traveling salesman problem and placed in the top **20%** of the class
- Implemented autocomplete search functionality, and UI using **EZGL** and **GTK**, while following accessibility guidelines to make UI more inclusive

Arm Team Project Lead | Robotics for Space Exploration May 2022 – Dec 2022

- Project lead for Inverse Kinematics implementation to manoeuvre the rover arm using **Python** and **ROS**
- Updated secondary Arduino I2C code in **Arduino C** to use interrupts resulting in observed stability in communication between primary and secondary Arduinos

AWARDS AND ACHIEVEMENTS

- **Second Place Prize** winner against 70 teams at NewHacks, IEEE UofT's hackathon
- **Third Place Prize** winner at KuriusHacks hackathon
- **Dean's merit award ($10000)** admission scholarship for academic excellence

EDUCATION

Bachelor of Applied Science
in Computer Engineering

University of Toronto

Sept 2020 – May 2025

Minor in Artificial Intelligence
Certificate in Engineering Business

Courses

Data Structures & Algorithms, Operating Systems, Intro to ML, Intro to Databases, Applied Fundamentals of Deep Learning

TECHNICAL SKILLS

Programming

Software

C/C++ | Python | Java | Kotlin | MATLAB

Web

TypeScript | HTML5/CSS3 | React | Module Federation

Skills

Agile Development | Software Communication | Engineering Design

Frameworks/Technologies

Postgres | AWS | Django | Git | EZGL | GTK | Smithy