Navidur Rahman

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Education

University of Toronto **Sep 2019 – May 2024**

Bachelor of Applied Science in Computer Engineering GPA: 3.81 *Toronto, ON*

- Data Structures & Algorithms
- Computer Networks
- Computer Organization
- Operating Systems
- Databases
- Probability & Applications

Experience

Tesla **May 2023 – Jul 2023**

Software Engineer Intern - Maps and Autopilot Navigation *Palo Alto, CA*

- Migrated the multistop trip planner from the car to the cloud infrastructure, reducing calculation times by up to **75%**
- Modified the car's firmware in **C++**, updated the central service's API in **Go**, and the appropriate microservice in **Python** to seamlessly communicate between the vehicle and the cloud infrastructure using **protobufs**
- Wrote a custom **A* algorithm** on the trip planner service to fix issues for routes with waypoints
- Developed a highly requested feature to highlight upcoming traffic signs on the route

Software Engineer Intern - Infotainment **Jan 2023 – Apr 2023**

- Led the development process of overhauling the Points of Interest popup to include reviews and photos by utilizing the **Google Maps API**, **C++**, and **Qt**
- This feature garnered exceptional user feedback, being recognized as one of the most positively reviewed additions in the release
- Collaborated closely with senior engineers, designers, and test engineers to make sure the feature was on track to be in a production ready state for the customer release deadline
- Debugged multiple high priority bugs causing crashes related to switching states within the Infotainment UI

Cisco Meraki **Sep 2022 – Dec 2022**

Software Engineer Intern - MX Firmware *San Francisco, CA*

- Updated the existing virtual test-bed using **Python** and **Docker** to support the newest firmware versions to enable testing of multi-core features
- Overhauled method to access test-bed console to improve the debugging experience for **30+** engineers
- Upgraded testing architecture to support up to 4 LAN ports from 1, allowing multiple concurrent clients

Tesla **May 2022 – Aug 2022**

Software Engineer Intern - Infotainment *Palo Alto, CA (Remote)*

- Refactored and unified previous views to reduce processor load and improve QTCar performance by **8%**
- Developed and improved the search functionality to show relevant results by utilizing a custom sorting algorithm
- Revamped Feeling Lucky/Hungry buttons to search and display a curated list of top locations specifically for the current driver

Geomechanica **May 2021 – Aug 2021**

Software Engineer Intern *Toronto, ON*

- Worked on creating and updating Irazu CAD software using **C++** and **Qt** on **Linux** and **Windows**
- Developed a feature to allow users to input commands through the terminal instead of using the GUI which improved designing speed up to **30%**
- Tested and updated **Python** scripts to allow users to automate builds

Projects

Champion's Draft | *Python, Flask, Google Cloud Platform, BeautifulSoup*

- Developed a website for fantasy League of Legends that allows users to create and join fantasy leagues, draft and trade players, and compete against other users
- Utilized **Python**, **Flask**, and the **Google Cloud Platform** to create a responsive and interactive user experience

Artsy | *React, Express, Javascript, HTML, CSS, Heroku, MongoDB, Git*

- Created a full stack web app for art creation and sharing created using **React**, **Express** and **MongoDB**
- Allowed users to create art on the built in canvas and submit their work for weekly challenges
- Top voted art pieces from the previous week's explore page are displayed on the front page

Technical Skills

Languages: C/C++, Python, Go, Javascript, HTML/CSS, SQL, Assembly
Frameworks/Libraries: Docker, Qt, Flask, React, Express, Pytorch, NumPy, TensorFlow
Developer Tools: Git/Github, Google Cloud Platform, Jira, Heroku, MongoDB, VS Code, Linux