Shaibal Muhtadee

Computer Engineering | University of Toronto

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EDUCATION

University of Toronto   Toronto, ON
Bachelor of Applied Science in Computer Engineering (Co-op)   *Sep. 2020 – Apr. 2024*

PROJECTS

Inventory Dashboard
Full Stack App   *Aug 2022 - Present*
- Created a dashboard web app with the **MERN** stack for viewing and managing retail inventory
- Utilized **React** and **Express** for frontend and managed backend with **Node**, **MongoDB** and **GraphQL**
- Learned to automate unit and integration tests with **Jest** and deployed with **AWS Lambda**

Portfolio Website - shaibalmuhtadee.com
Dynamic SPA   *May 2022 - Sep 2022*
- Created a responsive portfolio website with **React** and **TailwindCSS** to showcase my personal projects
- Utilized **TypeScript** and **React Hooks** to implement two themes and various interactive UI elements
- Leveraged the **NextJS** framework to improve **SEO** and simultaneously decrease site load times by **150%**

Dual To Do
CRUD App   *Aug 2022 - Sep 2022*
- Built a web app using **React** for couples to add, modify, and delete tasks and reminders for each other
- Implemented email and password **user authentication** and managed a **NoSQL** database with **Firebase**

JukeBox
Machine Learning and Classification   *May 2022 - Aug 2022*
- Created a **Convolutional Neural Network** model to train an **AI** to classify 10 different music genres
- Leveraged **PyTorch** and **TensorFlow** to confidently identify short audio clips with **92%** accuracy

ChromaMap
GIS Map Application   *Jan 2022 - Apr 2022*
- Created a **Geographic Information System** mapping software using **C++** and the OpenStreetMap **API**
- Implemented **Dijkstra algorithm** and **A* pathfinding heuristics** to solve the travelling salesman problem
- Improved browse and load times by over **300%** by developing a **Level of Detail** tiling scheme for the map
- Optimized application speed by **multi-threading** and code visualization, **stack trace** and **flame graphs**

ARBIS
Dynamic Web App   *Jan 2018 - Jun 2018*
- Designed a website using **HTML**, **CSS**, and **jQuery** to administrate room bookings for high school teachers
- Leveraged **PHP** and **AJAX** to asynchronously update data with the server, improving user satisfaction by **100%**
- Used **MySQL** to securely store and update hundreds of records of time sensitive room booking data in a **database**

EXPERIENCE

Classroom Ambassador   Toronto, ON
University of Toronto   *Sep 2022 - Present*
- Assisted and educated instructors with delivering in person and online classroom lectures and tutorials
- Built and ensured the operation of Intel Crestron teaching stations and various streaming and audio equipment
- Organized and monitored the information technology support of various classrooms throughout the university

PROGRAMMING SKILLS

Languages: C, C++, Python, JavaScript, HTML, CSS, Java, SQL, ARMv7 Assembly, Verilog

Technologies: Git, Linux, React, Flask, Django, Jest, Firebase, REST, GraphQL, TensorFlow, Docker, AWS