Dylan Cheng

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TECHNICAL SKILLS

Front End: JavaScript(ES5 and ES6), React, Next.js, MUI, HTML5, CSS3
Back End: Node.js, Express.js, Flask, Firebase, PostgreSQL RESTful API Development
Languages: C, C++, Python, Java, ARM Assembly Programming
Development Tools: Git, Linux, Vim, Agile Development

EDUCATION

University of Toronto   September 2020 – Present
Bachelor of Applied Science in Computer Engineering + PEY Co-op   *Toronto, ON*
Relevant Courses: Operating Systems, Data Structures and Algorithms, Software Design, Networks, Distributed Systems

EXPERIENCE

Software Engineering Intern   May 2022 - August 2022
Bloom   *New York, NY (Remote)*
- Worked in a full-stack capacity to build internal tooling and **REST API** endpoints using **Node.js** and **PostgreSQL** to accumulate and visualize metrics for performance, demographic, and revenue for each client
- Added functional improvements to Bloom's client-facing dashboard using **React**
- Integrated Bloom's algorithm into **7 clients'** websites with asynchronous JavaScript, and improved its performance by **decreasing its latency** on initial load to client websites
- Architected and deployed an interactive mobile-customer-facing interface to the PE Nation AU site
- Structured a reusable workflow for **A/B testing** with Bloom's algorithm on client product pages

Coding and Robotics Instructor   July 2021 - September 2021
Wize Computing Academy   *Vancouver, BC*
- Taught classes in robotics and coding to over 20 students in a wide age-range to promote early interest in STEM
- Engaged students in critical thinking and computer science concepts, which they learned to implement in basic programming languages and hardware

PROJECTS

Spacestagram | Website | Github | *React, NASA Mars Rover API*   January 2022
- Developed a mock Instagram web application to show randomized pictures from the **NASA Mars Rover API**
- Implemented loading display for data fetch and lazy-loading for images using React state and conditional rendering
- Created "like" animation and modal functionality using refs and CSS keyframes

Student Life Mapper | GitFront | *C++, GTK, OpenStreetMap*   January 2022 - May 2022
- Designed a **GTK** mapping application in C++ which accesses data from the **OpenStreetMap API** to map out cities, and which can perform optimal route navigation
- Developed a grid clustering algorithm to dynamically group points of interest on map pan
- Implemented **A*** and **multi-Dijktra** path-finding algorithms using **C++ STL containers** for route navigation
- Optimized map loading time through data prioritization and **multi-threaded computation**

Square Booking App | Github | *Next.js, Firebase, Square APIs, Material UI*   August 2022 - September 2022
- Designed a functional booking application in Next.js to mitigate the challenges of online booking for Square sellers
- Used **Firebase Authentication** and **Firestore** to verify, store, and query customer information
- Scheduled and queried bookings and available services from the Square seller dashboard using Square APIs
- Used **server-side rendering** to pre-load business and service-related information into React components