Josiah Tsang

Portfolio: https://josiahtsang.netlify.app/

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EDUCATION

The University of British Columbia   Sept 2019 – May 2024
Bachelor of Applied Science (BASc.), Integrated Engineering (Software Engineering)

PROJECTS

Project Management Opening System | *Next.js, Node.js, Auth0, NodeMailer, MongoDB*   Jun 2023 – Aug 2023
- Developed a full-stack web application to facilitate submission and tracking of opportunity requests for project managers.
- Employed a robust software architecture that integrates Next.js with MongoDB for scalable database management.
- Rendered dynamic and responsive user interfaces, leveraging Next.js inner API routing for seamless client-side navigation.
- Implemented user authentication through Auth0, allowing secure access to sensitive project and client information.
- Utlilized NodeMailer to enable administrators to send automated notifications regarding the status of their requests.

ScorePort | *Kotlin, C++, Android Studio, Figma*   Sept 2021 – Apr 2022
- Programmed an Arduino-based MCU to display score, shots and clock, and accompanying Android app controller.
- Implemented Bluetooth connection using Android Bluetooth Module to transfer data to the MCU on a connected thread.
- Utilized serial communication on the MCU to receive commands sent from Android app and update NeoPixel LED display.
- Designed mobile app wireframes in Figma and translated wireframes into Kotlin for the mobile app graphical interface.

Classification of Hand Dominance from EEG Signal | *Python, Scikit-learn, TensorFlow*   Sept 2022 – Dec 2022
- Built and trained various machine learning classifiers including Support Vector Machine (SVM) and K-Nearest Neighbour.
- Achieved an 80.65% model accuracy with a Non-Linear SVM while meeting minimum sensitivity and f-score metrics.

EXPERIENCE

Project Engineer Intern   Sept 2023 – Dec 2023
Jensen Hughes
- Collaborated with project teams in an Agile environment, interpreting stakeholder needs to deliver innovative solutions.
- Fostered seamless client communication to align product development with client expectations and project deadlines.

Software Developer   Sept 2022 – Aug 2023
UBC Multifaceted Innovations in Neurotechnology (MINT)
- Contributed to software development for multi-disciplinary engineering design projects focused on medical technology.
- Developed a CRUD app using the MongoDB, Express, React, Node.js (MERN) stack to retrieve, analyze and store EEG signals.
- Built a user intuitive interface for visualizing and interacting with EEG data using React, TypeScript and Bootstrap.
- Assisted with backend development by writing RESTful API routes and making endpoint requests using Axios.

Software Automation Developer Intern   Jan 2022 – Aug 2022
AirOps
- Developed business databases in Airtable and build Zapier automations for clients to streamline their business workflows.
- Accessed APIs to migrate data from external sources and wrote scripts in JavaScript to implement custom database features.
- Wrote scripts using JS and Airtable's API to retrieve data across multiple tables within a database for a retail client.
- Automated 40 task creations with condition-based triggers for a multi-phase retail project spanning 4 linked databases.
- Built an automated email system in Airtable for a product distribution client that pulls order data into specific field

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, C++, C#, Python, Kotlin
Technologies: React, Next.js, Node.js, Express, MongoDB, SQL, TailwindCSS, Axios, TensorFlow, Figma, Git
Coursework: Data Structures & Algorithms, Networking, Verification & Testing, Systems, Machine Learning