Josiah Tsang

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EDUCATION

The University of British Columbia   Sept 2019 – Nov 2024
Bachelor of Applied Science (BASc.), Integrated Engineering (Computer & Electrical)

EXPERIENCE

Amazon   Jun 2024 – Oct 2024
Software Development Engineer Intern
- Designed and developed a web portal for internal vendors to view delivery window date ranges and improving the accuracy of delivery window queries by 100% across various supply chain operations.
- Automated retrieval of historical delivery window logs, eliminating the need for on-call engineers to run manual queries.
- Deployed a highly scalable API hosted on AWS ECS Fargate to query a DocumentDB elastic cluster, set up with AWS CDK to store delivery window calculation logs and handle up to 1000 concurrent requests per second.
- Built a modern frontend using ReactJS and TypeScript, introducing a 2D calendar feature to provide an intuitive visualizer of the delivery window as date ranges.
- Collaborated with vendor and product managers to identify key user pain points and gather technical requirements, ensuring the solution aligned with business needs.

UBC Multifaceted Innovations in Neurotechnology (MINT)   Sept 2022 – Aug 2023
Software Developer
- Developed a CRUD app using the MongoDB, Express, React, Node.js (MERN) stack to process 1000+ EEG data points for a multi-disciplinary engineering design project focused on medical technology.
- Reduced EEG data analysis time by 30%, allowing signal processing researchers to focus on interpretation and design.

Claribase   Jan 2022 – Aug 2022
Database Developer
- Built business databases and automations that streamlined client workflows, resulting in 20% increase in efficiency.
- Automated 40 task creations with condition-based trigger, saving an estimated 80 hours of manual work for a multi-phase retail project spanning 4 linked databases.

PROJECTS

Spatial Calculator | *React.JS, Node.js, Express, Axios, PyTest, Ec2, Amplify*   Jan 2024 – Present
- Built an intuitive spreadsheet interface utilizing AG Grid API, allowing users to visualize and manipulate data 15% faster compared to traditional JavaScript libraries.
- Integrated testing using PyTest and Axios to simulate HTTP requests ensuring API functionality reliability.
- Deployed the API on an EC2 instance and the frontend on Amplify to handle 1000s of concurrent user requests per second.

Project Management System | *Next.js, Node.js, Auth0, NodeMailer, MongoDB, AWS*   Jun 2023 – Aug 2023
- Integrated Next.js with MongoDB for scalable database management, capable of handling over 500 active project requests.
- Implemented user authentication through Auth0, allowing secure access to sensitive project and client information.
- Leveraged NodeMailer to achieve administrator privileges for automating notifications for project status requests.

ScorePort | *Kotlin, C++, Android Studio, Figma* Sept 2021 – Apr 2022
- Established Bluetooth Low Energy (BLE) communication with range of up to 10m for efficient transfer between the Android app controller and MCU on a connected thread.
- Utilized serial communication at a baud rate of 9600 bps to ensure reliable data exchange between the app and MCU.
- Designed a user-intuitive mobile app interface in Figma, featuring score display, shot counter, and countdown timer.

TECHNICAL SKILLS

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