Jacob **Mutton**

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SKILLS

Languages:	JavaScript | TypeScript | Java | C | C++ | HTML | CSS | Python | C# | SQL
Technologies:	React | Vue | Docker | Kubernetes | Node | Firebase | Selenium
Tools:	AWS | Git | Jira | Confluence

PROFESSIONAL EXPERIENCE

Junior Software Engineer   **Highmark Interactive**   *Nov 2022 - Apr 2023*

- Developed and maintained various software applications in **PHP**, using **agile** development methodologies to continuously add new features and improve software performance.
- Collaborated with a software engineering team to identify workflow inefficiencies, including lengthy onboarding for new team members and slow development/testing processes.
- Created comprehensive scripts to simplify project setup for new team members, **reducing local development setup time by over 98%**.
- Streamlined development and testing processes by implementing a **CI/CD** pipeline, including creating a pipeline configuration file with build, test, and deploy steps and managing the **codeDeploy** step with custom scripts.

Software Engineer   **National Center for Audiology**   *May 2022 – Sept 2022*

- Spearheaded the design and development of a **full stack** web application to automate data collection through a in-house hearing aid calibration library, appreciably advancing hearing aid research by **increasing actionable data collection by 500%.**
- Designed and implemented modular and reusable **RESTful APIs** with **Rust** to service requests and facilitate communication between the **VueJS** frontend application, and the **MongoDB** client.
- Implemented secure account creation using **SHA256** encryption, which ensures the reliability of the data sources and serves as a method to limit user **API** transactions.
- Re-engineered existing features in **DSLmio**, the leading hearing aid calibration library, in **Rust**. This allowed internal developers to safely maintain the codebase.
- Designed and set up a highly available and fault-tolerant **Kubernetes** cluster on 4 local computers to serve as a deployment for this project and future projects.
- Wrote expansive end-to-end tests using **Selenium** and unit tests in **Rust** to ensure stable and fault proof code.

PROJECTS

Parcade - Parking Services Application
https://github.com/jmutton2/parcade

- Worked with the product team to design and develop the user interface (**UI**) of the application using **React** and **Material-UI,** and deployed the application using **Capacitor**.
- Developed a payment management system using the **Stripe API** to facilitate transactions between users.
- Developed the server-side of the application using **Node.js** and **Express.js**, and integrated it with the front-end using **REST APIs**.

Home Security System
https://github.com/jmutton2/pi_sec

- Designed and prototyped a wireless, modular home security system using **C** and **ESP32** (running **RTOS**).
- Constructed detailed design documentation using **Visio** based on user requirements, to ensure completeness and a swift development process.
- Utilized a hybrid peer-to-peer network architecture to efficiently handle various modules, including door sensors, surveillance cameras, keypads, alarms, and power outage detectors.

EDUCATION

Western University | GPA: 3.8   **London, ON**   *Sept 2019 – Apr 2023*

Bachelor of Engineering Science, Software Engineering

- Dean's Honor List, Western Hyperloop, Western AI, Western Rocketry
- Western Hacks, U of T Hacks, Western Engineering Competition