MARK AXELUS

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EDUCATION

University of Victoria   Apr. 2027
Major in Computer Science with Software System Options

TECHNICAL SKILLS

Programming & Markup: Python | Java | Javascript | TypeScript | HTML5 | CSS3
Frontend: React.js | Next.js | TailwindCSS V4 | Redux | React (Query · Router · Hook) | Toast | Vite | Expo | Figma
Backend & APIs: Node.js | Express.js | FastAPI | JWT | Cookie-Parser | Bcrypt
Databases & ORM: MongoDB | PostgreSQL | SQL | Prisma | Supabase
Cloud & DevOps: AWS (S3 · Cognito · EC2 · RDS · Lambda · ACM · Route53) | Vercel | Jenkins
Testing & QA: Selenium | WebdriverIO | Jest | Cypress | RTL | Postman
Environments & Others: Windows | MacOS | Linux | Visual Studio | Microsoft Office | English & Bahasa Indonesia

PROJECTS

Relay - Project Management App   Ongoing
Project   *Victoria, BC*
   • **Building a scalable** platform using **Next.js, TypeScript,** and **TailwindCSS,** enabling real-time task updates via **Redux** and **RTK Query**
   • **Implementing** a secure backend with **Express.js, PostgreSQL,** and **Prisma**, to be hosted with **AWS EC2** with user authentication through **AWS Cognito**.
   • **Building a secure and scalable API endpoints** to support task assignments, status tracking and seamless frontend integration.

Synapse - AI Web App   Jan. 2025
NwHacks2025 Hackathon   *Vancouver, BC*
   • **Developed a full-stack AI application** with an interactive UI using **TypeScript** and **Mermaid.js**, enabling dynamic visualizations to enhance user experience.
   • **Built and deployed a serverless backend** using the **Serverless Framework**, **TypeScript**, and **AWS Lambda**, for scalability and testing, as well as **optimizing cloud deployment and security** through **AWS services** like **S3, ACM,** and **Route53**
   • **Integrated LLMs, including OpenAI API and LangChain**, to automate key processes such as information extraction, summary generation, and structured **Mermaid** code creation.

BasicAuth   May. 2024
Project   *Victoria, BC*
   • **Designed and implemented** a secure user authentication system. Built with the **MERN** stack (**MongoDB, Express.js, React, Node.js**), ensuring robust performance, scalability, and security for user sign-up and login functionalities.
   • **Enhanced** security with password hashing and session management. **Bcrypt** is used for hashing passwords, **JWT** for secure authentication, and **cookie parser** for efficient session management.
   • **Developed** a responsive and efficient frontend. Leveraged **React + Vite** package for a dynamic user interface, styled with **TailwindCSS** for modern responsiveness, and ensured fast development cycles with hot module replacement.

CLUB EXPERIENCE

UVic Environmental Engineering Club   May. 2024 – Jan. 2025
University of Victoria   *Victoria, BC*
   • **Updated** the club website using **React.js** and **TailwindCSS**. **Implementation** of new features, bug fixes and code-work documentation.
   • **Kept detailed-logs** on updates, bug fixes, feature implementation, as well as documentation of meeting discussion, project status, goals and prospects.
   • Contributed to the **STM32 microcontroller communication logic** for a sea glider project, involving **flashing C code** and integrating **RTOS-based task scheduling** for modular and efficient system behavior.

CERTIFICATES, HONOURS, and RECOGNITIONS

Honor of Distinction: Minimum of 90% grade or higher throughout highschool
Scholarship: James R. Hoffa Memorial Scholarship