

OSMAN SULTAN

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EDUCATION

BASc, Industrial and Systems Engineering, University of Toronto

Expected 2025

Minor in Artificial Intelligence, Business

Relevant Coursework: DSA, Data Analytics, Deep Learning, Probability, Stats, Systems Design, Databases, Operations Research I & II, Simulation Modelling, Supply Chains, Human-System Interaction

SKILLS

Languages	Python, Java, JavaScript, TypeScript, SQL, HTML, CSS
Frameworks	Next.js, Vue.js, FastAPI, Spring Boot, Express.js, PyTorch
Libraries	React.js, React-Query, Zustand, Zod, Tailwind CSS, Bootstrap 5, Scikit-learn, Langchain
Data	MySQL, PostgreSQL, Supabase, Firebase, MongoDB, Redis, Pinecone,
Other Tools	Git, Bash, Docker, Linux (Ubuntu, WSL), Postman, Prisma, AWS (S3, Lambda, EC2)

EXPERIENCE

Full Stack Engineering Intern

Sept. 2023 - PRESENT

Doctalk Inc.

Toronto, ON

- Deployed and served **secure type-safe API endpoints** for registration, alerts/notifications, and message threads utilizing a **clean service-based architecture** with **zod** for robust validation, resulting in a 40% increase in infrastructure efficiency and enhanced scalability.
- Translated intricate **Figma designs** into custom **TailwindCSS UI components**, managing server state with **React Query**, fostering a seamless user experience and contributing to a 35% uplift in user engagement.
- Migrated from the deprecated **Redis graph** to a **Next.js** and **Supabase PostgreSQL** stack, enabling faster proof-of-concept developments and optimizing CI/CD processes to achieve 5x faster feature shipments with **Vercel**, without compromising high-speed data flow and system scalability.

Software Developer Intern

June 2022 - Sept. 2022

Molex LLC.

Waterloo, ON

- Transformed an **embedded software** CLI into a web client using **Python, FastAPI, and Jinja**, reducing testing times by 35% and enhancing system performance by 25%.
- Leveraged Python's **asyncio** for asynchronous multi-user testing on the provided testing device, achieving an 80% boost in efficiency. Further optimized tailored testing processes, resulting in a 20% increase in testing throughput.

PROJECTS

persona.ai. Developed a SaaS platform for AI chat personas using Next.js, TypeScript, TailwindCSS, Prisma, MySQL, Pinecone, and Redis. Delved into MLOps/LLMOps, optimizing LLM API interactions and memory management; leveraged edge computing and streaming, using Langchain for prompt engineering. Personas powered by Llama-2-70b-chat via Replicate. Utilized Stripe for payments and Clerk for authentication. Enhanced frontend with ShadCN UI. Links: [live site](#) & [GitHub repo](#)

CarKART. Built and tested a full-stack automotive marketplace using Vue.js (front-end) and SpringBoot (backend). Employed MVC architecture, CRUD operations, and a RESTful API to ensure a seamless UX/UI for buying, selling, and trading cars. Implemented unit testing and testing suites to validate functionality and maintain code quality. Utilized Figma for prototyping. View both frontend and backend repo's here: <https://github.com/osman-sultan>

Prompter. Engineered an open-source platform for sharing and discovering prompts aimed at enhancing the effectiveness of Large Language Models (LLMs). Leveraged technologies such as Next.js, MongoDB, Tailwind CSS, and NextAuth.js to facilitate seamless user interaction, streamlined authentication, and to foster community engagement around AI-driven language models. Visit the live site here: <https://projectprompter.vercel.app>