

# Jal Desai

 [jal2003.github.io](https://github.com/jal2003) |  [j9desai@uwaterloo.ca](mailto:j9desai@uwaterloo.ca) |  [linkedin.com/in/jal-desai](https://linkedin.com/in/jal-desai) |  [github.com/jal2003](https://github.com/jal2003)

## Skills

**Languages:** Python, Go, Java, C, C++ Ruby, JavaScript, TypeScript, HTML, CSS, SQL

**Frameworks/Libraries:** Ruby on Rails, Redux, Material UI, GraphQL, Node.js, React

**Infrastructure:** AWS (Lambda, S3, DynamoDB), Kubernetes, Git, Docker, PostgreSQL, Redis, Jenkins

## Work Experience

### HubSpot

May 2025 – August 2025

Software Engineer Intern

Boston, MA

- Developing customer platform infrastructure with **Java**, **DropWizard** and **Kafka** to streamline CRM workflows for **200,000+** businesses and enhance engagement with millions of customers worldwide

### 1851 Labs

Sept 2024 – Dec 2024

Software Engineer Intern

Toronto, ON

- Built login and channels pages for a B2C AI art platform with **TypeScript**, **React**, **Next.js**, and **AWS**, serving **10,000** DAUs
- Engineered and A/B tested onboarding features using **Convex** and **Material UI**, enabling fast iterations and **10x** user growth
- Refactored AI model inference and image generation services using, **Flask**, and **AWS Lambda**, improving system capacity by **10%** and reducing latency during peak image creation periods

### Regional Municipality of York

Jan 2024 – Apr 2024

Software Engineer Intern

Newmarket, ON

- Spearheaded a microservices-based internal platform tool for **2,000+** employees using **Python**, **FastAPI**, and **React**, managing, organizing and monitoring 300+ third-party applications, improving operational efficiency by **30%**
- Structured and normalized data schemas in **PostgreSQL** to enforce data integrity and simplify downstream integrations
- Implemented a **CI/CD** pipeline using **GitHub Actions**, automating deployment processes through **30%**

### DOZR

May 2023 – Aug 2023

Software Engineer Intern

Kitchener, ON

- Spearheaded a rental system with **Django**, **TypeScript**, and **AWS**, increasing construction equipment bookings by **50%**.
- Optimized database queries using **PostgreSQL indexing** and **Redis**, reducing execution time from **2.1s** to **400ms**.
- Automated **CI/CD** with **GitHub Actions** and **Kubernetes**, cutting deployment time from **30** to **5 minutes**.

### Avolta

Sep 2022 – Apr 2023

Software Engineer Intern

Toronto, ON

- Built a **React Native** mobile app to show vehicle location data using **GCP** for notifications, getting **95%** user engagement
- Integrated third-party **RESTful** APIs with **Flask**, reducing request latency by **60%** and enabling **2M+** transactions/month.
- Developed a **React dashboard** for monitoring vehicle status, streamlining user interactions and reducing UI latency by **50%**.

### Waterloop - Design Team

May 2022 – Aug 2022

Software Engineering Team Lead

Waterloo, ON

- Led the development of an internal applicant tracking system for **550+ applicants** using **Ruby on Rails** and integrated **1Password** for secure credential management, improving access control and reducing unauthorized access incidents by **40%**.

### Manulife - Waterloo Experience Accelerate


May 2022 – Aug 2022

Software Engineering Team Lead

Waterloo, ON

- Led a team of **4** student developers to revamp a tutoring website's UI using **React.js** and built a payment system with early bird and bundle discounts using **Stripe** and **Express.js**, delivering a fully functional prototype in **3 months**

## Projects

**InformaGenie**  | *Python, Ollama, LangChain, Streamlit, RAG, LLM*

- Developed a secure AI-powered web scraper agent using **Python**, **LangChain**, and **RAG** serving **50+** users

**InvisiCut**  | *Python, Streamlit, rembg, PIL*

- Developed a free web-based tool that uses AI to remove image backgrounds instantly for **200+** users

## Education

### University of Waterloo

Sep. 2021 – Apr. 2026

Candidate for Bachelor of Mathematics, Computational Mathematics

Waterloo, ON

- Coursework:** Algorithms, Data Structures, Database Systems, Cloud Computing, Object-Oriented, Distributed Systems