Martin Sit

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Education

University of Waterloo Sep 2024 – Present
Honours Bachelor of Computer Science, Co-op *3.8/4.0 GPA*

Professional Experience

Shopify | *Ruby on Rails, React, TypeScript, GraphQL, MySQL, Kafka, GCP* May 2025 - Aug 2025
Software Engineer Intern (Cross-Border Foundations) *Toronto, ON*

- Developed a ML-powered product classification system for international shipping, supporting 5,000+ HS codes and 750,000+ cross-border merchants
- Built an end-to-end classification pipeline from GraphQL mutations to ML inference, MySQL storage, and Kafka-triggered UI updates, designed to scale to 10M+ SKUs annually
- Created a real-time suggestion feature in the product editor that reduced merchant effort by surfacing likely HS codes
- Owned project's full-stack development from system design to VP-level demo, establishing scalable architecture

Browserbase | *React, Next.js, TypeScript* Apr 2025 - May 2025
Software Engineer Intern (Director AI) *San Francisco, CA · Remote*

- Improved onboarding flow for Director, an AI browser agent, contributing to a launch that reached 1M+ views
- Refined the agent output interface, streamlining steps to first workflow completion and reducing cognitive load for users

Sunnybrook Research Institute | *Python, MATLAB, TensorFlow, Keras* Jul 2023 – Aug 2023
Machine Learning Research Intern (Focused Ultrasound Lab) *Toronto, ON*

- Engineered a 3D convolutional neural network (CNN) to optimize treatment monitoring, enabling real-time analysis
- Achieved a 46x speed improvement with high accuracy, enabling ultra-fast image reconstruction approximations
- Expanded ML training data by 50% by generating synthetic radio frequency image datasets
- Conducted research on advanced neural net architectures (U-Net, ResNet, DenseNet) and implemented key findings

University of Waterloo | *Python, Flask, PyAutoGUI, Networking, Linux* Oct 2022 – Jul 2023
Cybersecurity Research Intern (Prof. Diogo Barradas) *Waterloo, ON*

- Architected a GUI automation system to collect over 20 GB of TCP/IP packet data from video conferencing calls
- Scraped and processed 100+ hours of video data to curate a robust dataset for ML model training
- Presented papers to lab group on traffic fingerprinting and censorship-resistant internet communications

Projects

Vibe Draw – Turn Sketches into 3D Models – **3M+ views, 1,900+ GitHub stars** | *Python, FastAPI, Next.js, TypeScript, GCP*

- Created tryvibedraw.com, an AI app that transforms sketches into interactive 3D models
- Reached 3M+ views, profitable, starred 1,900+ times on GitHub, and drew inbound VC interest (Sequoia, a16z, GC, others)
- Engineered a FastAPI backend with Cloud Tasks, Cloud Run, and SSE for scalable, async 3D generation workflows
- Developed a Next.js frontend with TLDraw for sketching, Three.js for 3D rendering, and Stripe-powered paywall

Make it Jake's – Resume Template Translator – **10,000+ users** | *Ruby on Rails, Redis, Docker, Remix, TypeScript, GCP*

- Shipped jakesresu.me (10,000+ users), enabling users to convert any resume into the industry-standard LaTeX template
- Built a containerized Ruby on Rails backend with Redis job processing, delivering RESTful APIs for resume generation
- Integrated LLMs into the backend for semantic resume parsing, enabling accurate LaTeX generation
- Developed a responsive Remix frontend with live progress updates and PDF rendering

Slide it In – AI Presentation Slides Generator – **7,000+ users** | *Go, React, Next.js, TypeScript, Docker, GCP*

- Launched justslideitin.com (7,000+ users), an AI tool that transforms documents into customizable presentation slides
- Architected a scalable, serverless Go microservices backend with GCP for distributed job queuing and slide generation
- Developed a responsive Next.js frontend with live progress updates and in-browser PDF/HTML rendering

LiteNet – Neural Network Framework With 0 Dependencies | *C++*

- Built a C++ deep learning framework, with a user-friendly API based on PyTorch and Tensorflow Keras
- Implemented all algorithms (ex. backpropagation) as well as the underlying linear algebra operations from scratch

Skills

Languages: Python, C++, Java, JavaScript, TypeScript, Ruby, SQL, Go, HTML, CSS
Technologies: React, Next.js, Express, Node.js, Flask, Django, FastAPI, Kafka, GraphQL, Tailwind CSS, PyTorch, TensorFlow, Rails
Development Tools: Git, Docker, Bash, Linux, MongoDB, PostgreSQL, Firebase, AWS (Certified Cloud Practitioner), Azure, GCP