

MARTIN SIT

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EDUCATION

University of Waterloo

Honours Bachelor of Computer Science, Co-op

4.00 GPA

Sep 2024 – May 2029

PROFESSIONAL EXPERIENCE

Sunnybrook Research Institute | Python, MATLAB, TensorFlow, Keras

Jul 2023 – Aug 2023

Machine Learning Research Intern

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

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, 1,600+ 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 1,600+ 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 payroll

🔗 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

🔗 Twirl – AI Agent for Building CAD Models (UofTHacks Winner) | FastAPI, React, Next.js, Three.js, OpenSCAD, Azure

- Developed an AI CAD modeling agent for instant parameterized 3D model generation from natural language prompts
- Enabled real-time model rendering and customization via interactive sliders, providing fine-tuned control
- Designed an intuitive Next.js frontend for seamless prompt input and live 3D visualization

🔗 EcoRewards – Mobile Rewards App (Hack the North Winner) | Remix, React, Express.js, PostgreSQL, Tailwind CSS

- Won RBC's 1st Place (\$1,200) prize out of 842 participants at Hack the North 2024, Canada's largest hackathon
- Developed a mobile app using Remix and React to reward eco-friendly purchases, with AI-powered receipt scanning
- Designed the backend using Express.js and PostgreSQL, enabling seamless processing and classification of receipt data

SKILLS

Languages: Python, C++, Java, JavaScript, TypeScript, Ruby, SQL, Go, Racket, HTML5, CSS3

Technologies: React, Next.js, Express.js, Node.js, Flask, Django, Vue.js, Tailwind CSS, PyTorch, Tensorflow, Rails

Development Tools: Git, Docker, Bash, Linux, MongoDB, PostgreSQL, Firebase, AWS (Certified Cloud Practitioner 🔗), Azure, GCP