James Han

647-570-1883 | jameshan.cs@gmail.com | linkedin.com/in/jameshan27/ | github.com/lxyhan | jameshan.vercel.app/

EDUCATION

University of Toronto Toronto, ON, Canada

Bachelor of Science in Computer Science, Statistics, and Mathematics Sep. 2023 – May 2027

- Relevant Coursework: Data Structures & Algorithms, Statistical Methods, Linear Algebra, Software Design, Systems Programming, Intro to Computer Engineering, Calculus I & II & III, Ethics of Software
- UofT AI Community Engagement Associate, Java Instructor, UofT Run Club Lead

TECHNICAL SKILLS

Languages: Ruby, Python, C, TypeScript, Java, R, HTML/CSS
Frameworks: Ruby on Rails, Next.js (React), Angular, Flask, Node.js, Express.js, SpringBoot
Cloud/DevOps: Redis, AWS (EC2, S3, Lambda, Bedrock, Rekognition), Firebase, MongoDB, Docker, Vercel, Heroku
ML/AI: PyTorch, OpenCV, TensorFlow, Databricks, Mediapipe, Jupyter Notebook

EXPERIENCE

Software Developer Toronto, ON, Canada

Department of Computer Science, University of Toronto May 2025 – August 2025

- Contributed to the core development of **PythonTA**, a static analysis and linting framework powering automated feedback for **1,500+ students** in Python courses using **Abstract Syntax Trees** for code parsing
- Enhanced integration with tools like **pylint**, **pycodestyle**, and **mypy**, boosting feedback coverage and accuracy

Software Developer Toronto, ON, Canada

City of Brampton + Blueprint September 2024 – April 2025

- Led frontend development of a production-grade **Next.js + Node.js platform** for the City of Brampton, empowering residents with streamlined access to municipal resources
- Implemented **Redis caching layer** that reduced API response times by **61%**, improving UX at peak load
- Engineered reusable and accessible **React component library** capable of supporting **3,000+ concurrent users** with responsive and modular design
- Collaborated in an agile 8-person team using GitHub Projects, CI/CD pipelines, and weekly sprints to deliver a scalable civic tech solution

Full-Stack Software Engineer Toronto, ON, Canada

Markyt, University of Toronto Funded Startup December 2023 - August 2024

- Built and scaled a **SvelteKit** marketplace platform connecting influencers with businesses
- Developed secure **Firebase** authentication and **Firestore** database capable of handling **1000+** daily transactions
- Integrated **Stripe** payment system, implementing webhooks for automated subscription management
- Created responsive mobile-first UI with **Tailwind**, achieving **43%** faster load times
- Led technical architecture and **Vercel** deployment, maintaining high uptime and sub-second response times

PROJECTS AND AWARDS

1st Place at Google x Hack the Future (Revo) | *Next.js, GCP, Gemini, Mapbox, React Flow* February 2025

- Built a return management system using fine-tuned **Gemini** models, reducing fraud rates by **57%**
- Built interactive logistics map (**Mapbox**) and intuitive workflow interface (**React Flow**)
- Presented winning solution at **Google HQ**, placing **1st** among **200** teams

1st Place Overall at UofTHacks (Persona) | *Next.js, OpenCV, Flask, Node.js, Three.js* January 2025

- Won **1st Place** among **2000+** applicants with microservices-based language learning platform
- Implemented real-time **computer vision** system for emotion and pronunciation analysis
- Developed responsive **3D** avatar system with **Three.js**, reducing load time by **72%**
- Led development and presentation, beating **135+** competing projects through technical innovation

1st Place at NewHacks (Tech for Natural Disasters) | *Flask, Databricks, Jupyter Notebook* October 2024

- Built disaster reporting platform processing **100K+** data points for real-time heatmap generation
- Engineered **ML pipeline** using **Databricks** to analyze satellite imagery with **90%** accuracy
- Optimized API performance resulting in **50%** reduction in response time