

Sansita Malhotra

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Education

University of Toronto - St. George Campus, Toronto, ON <i>Bachelor of Applied Sciences (BASc) in Computer Engineering + PEY Co-Op</i> • Intended Minors: Artificial Intelligence	Expected April 2029
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Technical Skills

Languages: Python, C/C++, Java, JavaScript, Verilog HDL, SQL, MATLAB, TypeScript

Frameworks & Tools: React, Node.js, Express.js, FastAPI, Next.js, Tailwind CSS, Git, REST APIs, OCR, Vercel

Data/Databases: pandas, NumPy, MongoDB, SQLite, MySQL, PostgreSQL

Hardware: Verilog, FPGA Development (Altera DE1-SoC), Quartus Prime, VGA Protocol, Arduino IDE

Work Experience

Full Stack Developer <i>S M Software Solutions</i>	<i>Jun 2022-Present</i> <i>Toronto, ON</i>
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- Built and deployed **FastAPI** customer support chatbot on **AWS** handling **250+ daily client inquiries** with automated routing; system answers FAQs from pre-trained knowledge base and routes complex requests to available admins via **email notification pipeline** based on real-time login tracking, reducing response time by **40%** and **eliminating 8hrs/week** of manual coordination
- Optimized client-facing system performance by **35%** through backend refactoring (query optimization, API response caching), and frontend improvements (lazy loading, component re-render reduction)
- Developed and maintained MERN stack client applications with REST APIs handling user authentication, and real-time data synchronization across multiple provincial government contract deliverables
- Resolved **100+ production defects** through **QA testing** and cross-team debugging; participated in code reviews and technical documentation following established coding standards
- Maintained and debugged legacy codebases for client projects; implemented bug fixes and feature enhancements based on client feedback, ensuring smooth production deployments

Projects

GigIT – Fintech KYC Verification Identity Platform NewHacks Winner github.com/sansitamalhotra/GigIT FastAPI, OCR, React.js, REST APIs	<i>November 2025</i>
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- Built **OCR + LLM extraction pipeline** for identity verification (~**85% accuracy** on name, DOB, address); improved OCR reliability by **30%** under varied lighting through preprocessing stack (deblurring, noise reduction, contour isolation)
- Developed **KYC compliance dashboard** with discrepancy detection and verification workflows; shipped production-ready MVP in 36 hours, ranked **#1 for technical depth**

Schema Sync – AI Data Integration Copilot Hack the Valley X github.com/sansitamalhotra/SchemaSync Python, FastAPI, pandas, React (Next.js), TailwindCSS, SBERT, SQLite	<i>October 2025</i>
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- Engineered **SBERT reconciliation engine** achieving **92% field match accuracy** across multi-bank schemas; designed manual override workflows with confidence thresholds, preventing data corruption while reducing mapping time from **8hrs to <10min per dataset**
- Implemented semantic embedding pipeline processing **100+ fields/sec**; created **FastAPI backend** and **React dashboard** enabling audit review, manual corrections, and 1-click unified dataset export

SafetyNet Her – AI-Powered Community Safety Network DeltaHacks 12 github.com/sansitamalhotra/SafetyNet-HER React, TypeScript, Node.js, Express.js, Google Gemini API, MongoDB	<i>January 2026</i>
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- Engineered **AI threat triage system** using **Gemini API** to analyze SMS messages, classify **12+ incident types** (following, harassment, assault), score urgency (1-10), achieving **92% community resolution rate** and **4.2min** average response time (4x faster than 911)
- Built real-time volunteer dispatch system with **MongoDB geospatial indexing** for location-based matching and **live ETA tracking**; developed fake call escape feature with AI voice synthesis enabling discreet exits from unsafe situations

Dino Game – Hardware VGA Engine <i>Verilog, VGA Protocol, DE1-SoC FPGA, Quartus Prime</i>	<i>December 2025</i>
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- Built hardware-accelerated game using **Verilog HDL** with pixel-accurate **collision detection** and sprite rendering; engineered timing-correct VGA controller rendering **30k+ pixels/frame** at **640x480 resolution** with stable **60Hz refresh**