Jake Gameroff

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EDUCATION

McGill University *September 2022 – April 2026*
B.A. Honours Mathematics and Computer Science GPA: 3.8/4
Awards: Alma Mater Scholarship ($3,000), Tomlinson Award ($300), Faculty of Arts Scholarship ($100).

WORK EXPERIENCE

Nexless Healthcare – Software Engineer *January 2026 – Present*

- Building a cloud infrastructure platform on FastAPI. Designed a rental pipeline using Celery workers to provision instances via provider APIs, register nodes over a Headscale VPN, and manage ACL access.
- Automated session lifecycle with Redis task scheduling for expiration, credit deduction, and instance teardown.

IMD Research – Software Engineer *December 2025 – January 2026*

- Built a multi-tenant AI avatar platform with a real-time speech pipeline (Deepgram STT, OpenAI LLM, Cartesia TTS) over LiveKit WebRTC. Developed FastAPI backend with a custom avatar training pipeline (Tavus API), JWT auth, and per-user agent config.
- Automated conversation summarization with GPT-4o and PDF report delivery via SMTP.

SOFTWARE VENTURES

Monotope AI – Technical Cofounder (monotope.ca) *2025 – Present*

- Built a fully async LiveKit voice agent with appointment scheduling, CRM integration, and vector DB search; self-hosted agent and SIP server on AWS via SIP trunks.
- Built full-stack dashboards for call telemetry, transcripts, and summaries. Built pipelines for reception, call screening, and emergency routing.

SeatFinder (seatfinder.ca) *2025 – Present*

- Course enrollment tracking service for Canadian university students; monitors seat and waitlist availability and sends instant notifications.
- Serving 8 universities; 31,000+ notifications sent across 2,300+ tracking requests.
- Stack: Flask, Celery, Redis, MongoDB.

RESEARCH EXPERIENCE

McGill Shared Reality Lab – ADiNA *September 2025 – December 2025*

- Contributed to ADiNA, an LLM-powered conversational avatar for senior residences. Built task management and psychosocial analysis modules; tasks stored in Weaviate with semantic vector search, psychosocial summaries generated via parallel AI agents.

NSERC USRA in Theoretical Computer Science *May 2025 – August 2025*
Supervised by Professor Robert Robere, McGill University

- Conducted 15 weeks of full-time research in propositional proof complexity and structural complexity theory.
- Studied the compressibility of decision-tree reductions between total search problems (TFNP). Presented a research poster at UCORE 2025.

TECHNICAL SKILLS

Languages:	Python, Bash, SQL, LaTeX
Frameworks:	FastAPI, Celery, LangChain, LiveKit, Socket.IO, asyncio
Infrastructure:	Docker, Redis, MongoDB, Headscale, Weaviate, ngrok, Git, Linux
Auth & Cryptography:	JWT, bcrypt, HMAC, SHA-256, public-key cryptography, blockchain