Gabriel Thompson

sonofthomp | sonofthomp | gabe.biz | gabrielezrathompson@gmail.com

EDUCATION

2023 - 2027	**University of Toronto** (BS, Computer Science)
	Activities: Focus in Technology Leadership (One of 29 students in my year selected), CSSU, GenAI Genesis
2019 - 2023	**Stuyvesant High School**

EXPERIENCE

Software Engineering Intern — May 2025 - Aug 2025
Stealth Startup — *New York, NY • On-site*

- **1st intern hire** at Elad Gil-backed seed-stage startup building a web platform for equipment rental firms. Founded by former Head of Engineering of a >**\$10B fintech** firm. Serves multiple enterprise clients, including publicly traded firms.
- Built **Python/SQLAlchemy** infrastructure to define, execute & validate **PostgreSQL** queries, and serialize the result (will be used to represent **3,000+** visualizations), allowing clients to generate custom visualizations of any given SQL query. Built **Pydantic** engine for auto-generating API response schemas and **Flask** system for dynamic **RESTful** serialization endpoints.
- Wrote **Alembic** index generation for **200+** composite **Postgres** indexes, resulting in >**10x** improvement in indexing speed.
- Built **TypeScript** file attachment feature for delivery driver comments. Used >**10,000 times** in 43 days since I built it.
- Built SMS opt-out tracking system, via **Dramatiq** cron job to poll **Telnyx** API used for tracking **9,000+** SMS recipients.
- Writing the 1st post for the company's engineering blog. Referred the entire rest of the intern class (three other people).

Software Engineering Intern — May 2024 - Aug 2024
Snorkle Labs — *New York, NY • Hybrid*

- Built **Python** pipeline to match natural language body part names to **4,000+** mesh IDs in **10+** GLB medical models.
- Wrote script to pre-process medical models by assigning codes from the FMA ontology to each mesh ID. Created matching algorithm which works by recursively calling **OLS4 API** to find a mesh ID with a matching medical ID.
- Built **React** & **Bootstrap** feature for users to generate anatomical presentation drafts with **GPT-4** and view them.
- Snorkle got high score on request for **\$286k** in **NIH funding**, with my feature cited as key reason by reviewers

Student Web Developer Team Lead — Apr 2024 - Apr 2025
University of Toronto CS Student Union — *Toronto, ON • Hybrid*

- Co-built **Next.js** and **TypeScript**-based site for **400+** students at CSSU events, with which users can scan QR codes that update every 15 seconds at event booths to log their attendance. (link to source code)
- Wrote protocol for generating and validating QR codes using **HMAC encryption**, built **API** for sending QR codes from server to client. Built **Tailwind**-based UI and database in **PostgreSQL**. Deployed to **Vercel**. **CI/CD** in **GitHub Actions**.
- Built hackathon GenAI Genesis's application system with **Next.js**, **Firebase** and **Tailwind**. Used by **1,500+** applicants.

Student Full-Stack Developer Lead — May 2022 - Jun 2023
Stuyvesant High School Writing Center — *New York, NY • Hybrid*

- Built and deployed full-stack website to manage school's Writing Center for **3,300+** students and **50+** editors across all four grades. Website built in **Python**, **Flask**, **SQL**, and **JS**, deployed via **DigitalOcean**. (link to project), (video demo)
- Developed user authentication system for **300+** accounts, editor feedback system, and email notification system to send **2,000+** emails to **500+** email addresses. Oversaw **24/7** deployment of website for **8,000+** hours.

PROJECTS

- **Personal Blog** – Wrote 6,500+ words on CS & math-related topics, including SHA-256 and 12 tone-equal temperament
- **PawPoints** – **TypeScript** and **Firebase** app for tracking stray pets. Won 1st place of 54 teams at NewHacks 2023.
- **MIDI Harmonizer** – A **Python** tool for auto-tuning vocals to multi-voice MIDI arrangements using **PSOLA**.

RELEVANT SKILLS

Languages: JavaScript, TypeScript, Python, SQL, Java, Bash, Processing, Sonic Pi
Tools: React.js, Next.js, Flask, Postgres, SQLAlchemy, Docker, Tailwind, DevOps (GH Actions, Vercel), Git, AWS Lambda