

# Gabriel Thompson

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## SUMMARY

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First-Year Computer Science student at the University of Toronto. Full-stack web developer, passionate about data science, music theory, and linguistics. Aspiring to pursue a career in computer science.

## EXPERIENCE

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### Research Intern — CUNY Graduate Center

May 2023 - present

- Completed mentorship under Prof. Kyle Gorman on [Wikipron](#), a Python and requests-based library for scraping pronunciation data from Wiktionary in 250+ languages
- Proposed and implemented Python [feature](#) allowing >10 new languages' phonologies to be parsed

### Mentee — Google Mentorship Program

Feb 2023 - Jun 2023

- Led team working with Google developer [Jeremy Espenshade](#) to create DAFTER-GPT: a Python, Flask, and JavaScript-based GPT-3 based ML Chrome extension allowing users to train a LLM to write emails in their writing style using the OpenAI API. Presented final project to Google NYC employees.
- Wrote Python engine for generating descriptions of the writing styles of 500+ personal emails using LLM via the OpenAI API, and generating new emails given new descriptions.

### IT Director — Stuyvesant Writing Center

May 2022 - Jun 2023

- Single-handedly 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](#)
- 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.

### Data Science Intern — Queens Public Library

Dec 2021 - Apr 2022

- Worked in a team of 10+ high school students developing AskTeisha, an AI chatbot built using the Google DialogFlow API to help high school and college students find internships. Back-end written using Python, Flask, and requests, front-end written in HTML/CSS/JS.
- Created BeautifulSoup-based feature for extracting 100+ job listings Craigslist, HireTeen, Indeed, and other websites.

## MISCELLANEOUS PERSONAL PROJECTS

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- [Personal Blog](#) – My personal blog, where I've written 6,500+ words about CS & math-related topics that interest me
- [Layover Calculator](#) – Web app that uses data from the Yelp and Google Maps API to generate suggestions for things to do during flight layovers. Back-end written in Python, Flask, SQL, front-end written with Bootstrap, JavaScript, and Jinja. Built for Software Development class.
- [Floom Web Conferencing](#) – Web video conferencing app built in JavaScript, Flask/Jinja, and Flask-SocketIO. Uses video analysis with NumPy and PIL to track whether a user is paying attention. Hack-a-thon project I built with my team for [MIT Blueprint](#).
- [MIDI-based Vocal Harmonizer](#) – A Python tool for autotuning vocals to multi-part harmonies using the [PSOLA algorithm](#). Built with NumPy and Jupyter Notebooks.
- [Efficiency Gap Calculator](#) – JavaScript-based website that uses voting data to inform users on how gerrymandered their district is, using an algorithm called the "Efficiency Gap". Built for political writing class.

## EDUCATION

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### 2023 – now University of Toronto

First-Year, Bachelor of Arts in Computer Science

### 2019 - 2023 Stuyvesant High School

*Activities and societies:* CS Dojo, StuyHacks, Writing Center, Math & CS Research, StuyPy, STC Band, Concert Band, Symphonic Band, All-City Marching Band, Competitive Computing Club, Linguistics Club

## RELEVANT SKILLS

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*Programming Languages:* Python, Java, JS, HTML, CSS, Processing, Markdown,  $\text{\LaTeX}$ , Sonic Pi

*Other Tools/Frameworks:* Git/GitHub, SQL, Flask, Jinja, NumPy, p5.js, Bootstrap, Foundation, BeautifulSoup, PIL