

Justin Xing

647-831-0965 | justin.xing@uwaterloo.ca | justin-xing.github.io | [LinkedIn](#) | [GitHub](#)

Programming Languages: Python, TypeScript, JavaScript, C++, C, HTML, CSS, SQL, Bash

Frameworks: Django, Flask, React, Vue, Node

Technologies: Git, PostgreSQL, Docker

EDUCATION

University of Waterloo

September 2022 - April 2027

- Bachelor of Computer Science

Cumulative GPA: 3.9/4.0

WORK EXPERIENCE

Google

May 2025 - August 2025

Software Engineering Intern - YouTube

San Bruno, CA

- Used TypeScript and C++ to build beautiful and performant user experiences across YouTube desktop and mobile web
- Owned end-to-end feature development, from writing design documents to implementation, experimentation, and launch
- Debugged and resolved production issues, including a high-severity bug that prevented the YouTube desktop player from loading properly, restoring service for millions of users
- Remediated browser incompatibilities by adding and integrating a new polyfill library, ensuring a consistent user experience across billions of devices
- Monitored key performance and engagement metrics to validate impact and guide post-launch improvements
- Coordinated with overseas engineering teams to plan long-term migration strategies away from legacy infrastructure

Government of Canada

September 2024 - December 2024

Full-Stack SWE Intern - Financial Intelligence Unit

Ottawa, ON

- Spearheaded the development of an internal platform facilitating the secure creation of customizable AI assistants, using Vue and Node to enable hundreds of employees to offload manual work to the LLM
- Led the complete restructuring of the team's irregular development lifecycle to an agile scrum approach, increasing tickets completed per developer by ~100% through the establishment of fast and constructive feedback loops
- Established and taught a formal set of coding standards and oversaw the complete refactoring of a previously disorganized 30,000+ line codebase, reducing future development time by following clean code principles

Qualifacts

January 2024 - April 2024

Full-Stack SWE Intern - OnCall Health Telehealth Platform

Toronto, ON

- Developed and implemented new features using React and Django in an agile environment, consistently completing high-priority tasks (2 tickets per sprint, 3 story points each) to meet strict release deadlines
- Employed the test-driven development methodology, writing comprehensive back-end unit tests to guide development and consistently achieve 100% code coverage
- Worked together with senior engineers to resolve 2 critical release-blocking back-end bugs, procedurally tracing back steps from the output to diagnose the cause and implementing the appropriate tests and solution

Simon Fraser University | [Deployment](#) |

May 2023 - December 2023

Front-End SWE - Functional & Anatomical Imaging & Shape Analysis Lab

Remote

- Optimized components according to Web Content Accessibility Guidelines, audited using Lighthouse and achieving a performance score of 92%, an accessibility score of 93%, a best practices score of 96%, and an SEO score of 100%
- Migrated deprecated Ruby on Rails app to a React front end, using Redux and Router libraries
- Created and styled over 35 responsive components using CSS with animations using transitions and transformations

PROJECTS

Short Form Video Generator | [Github Code](#) | (Django, Python)

January 2024

- Built a short form video generator to generate news videos with different levels of bias to showcase the dangers of media
- Used the NewsData API and BeautifulSoup to collect and scrape 200+ news articles to parse and skew using OpenAI
- Designed a script to split news articles into parts, and for each part generate a relevant video using the Giphy API and voiceover audio using Google Cloud TTS
- Used FFmpeg to stitch together video and audio files to be uploaded and shared using the YouTube API
- Automated entire process using Django and Twilio to occur on a message prompt to a phone number

Strategy Game Playing Algorithm | [Official Game](#) | (Python)

August 2023

- Developed Python algorithm for an international 1v1 tournament (Terminal) which reactively counters enemy strategies by concentrating defenses in the enemy's most commonly attacked area and attacking their predicted weak point
- Competed on the season 8 global ladder, ranking #64 out of 146,163 algorithms