Justin Xing

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Programming Languages: Python, JavaScript, C++, C, HTML, CSS, SQL, Bash
Frameworks: Django, Flask, React**,** Vue, Node
Technologies: Git, PostgreSQL, Docker

EDUCATION

University of Waterloo **September 2022 - December 2026**

- Bachelor of Computer Science, AI Specialization — Cumulative GPA: 3.9/4.0

WORK EXPERIENCE

Government of Canada **September 2024 - December 2024**

Full-Stack SWE Intern — 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
- Streamlined CI/CD pipeline to perform automated tests in Azure DevOps, ensuring stray bugs are immediately caught, and reducing the need for manual testing by an estimated 3 hours per week per developer

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

Canada Post **May 2023 - August 2023**

Product Intern - Financial Services — Toronto, ON

- Researched the Canadian financial services market to develop a novel payments product offered at over 5900 post offices
- Redesigned UX for 5 core antiquated webpages from scratch using Figma to optimize the flow of interaction based on core principles (Clarity > Efficiency > Consistency > Beauty)
- Wrote and documented SQL queries to manage and supply data from Excel to PowerBI, increasing process efficiency by 500% of the originally manual process, saving analysts over 2 hours per week and exponentially more as data scales

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 Beautiful Soup 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