Simon Wu

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EDUCATION

University of Waterloo — Waterloo, ON
Candidate for Bachelor of Computer Science – Advanced Coursework — *Sept. 2022 – May 2027*

TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, TypeScript, HTML/CSS, Scheme
Frameworks: React, Node.js, Gradle, Next.js, Eleventy, Prisma
Tools: Git, LaTeX, pandas, NumPy, PyTorch, einops, TensorFlow

RESEARCH

Cancer Biology Research Assistant — September 2021 – September 2022
Texas Tech University – STEM&Leaf Corps — *Remote - Lubbock, TX*
- Wrote and researched tryptophan section of *Modulating amino acid levels to enhance cancer immunotherapy*
- Paper has been submitted to International Journal of Oncology, pending review
- Explored the effects of amino acids on cancer treatment, especially immunotherapy treatments
- Performed programmatic literature search for meta-analysis using nltk, pandas

PROJECTS

Machine Learning Text Generation | *Python, TensorFlow, Jupyter* — November 2022 – Present
- Trained RNN to generate text based on the works of William Shakespeare, online technology blogs and cooking recipes
- Explored training techniques and their drawbacks, such as teacher-forcing
- Currently experimenting with transformer system based on GPT-2 for improved text generation

Self-hosted services | *Shell, Python, HTML, CSS, Docker* — November 2019 – Present
- Self-hosted a variety of services and utilities using hosting providers, bare-metal equipment
- Hosted and troubleshooted private cloud storage, static sites, personal libraries
- Administrated Windows, macOS, Linux systems and Docker containers

Highmark | *JavaScript, HTML/CSS, Jekyll, Showdown* — October 2020 – November 2020
- Developed a static web application in pure JavaScript and HTML/CSS, self-hosted on a VPS
- Rendered automatic previews and exported pages using Showdown
- Implemented saving to/loading from disk

EXPERIENCE

Web Developer — June 2021 – Present
Prospective Medical Professionals - PuMP — *Remote - Toronto, ON*
- Developed responsive webpages and components using TypeScript for a Next.js site with 10000+ interactions
- Maintained database and search using React and PostgreSQL to serve volunteer and internship opportunities
- Collaborated with design team to make changes and improvements to product, from wireframes to final site

Data Analyst / Developer — June 2020 – January 2021
Community Advocates for Just and Moral Governance — *Remote - San Diego, CA*
- Used Tesseract OCR and Tabula to enhance the processing of SDPD racial arrest data
- Efforts contributed to successful lawsuit filed against SDPD and City of San Diego
- Consulted on web design and outreach tactics for online charity campaign

ACHIEVEMENTS

picoCTF 2022 | *2nd Place Canada-Wide, 14th Globally* — March 2022
- Competed in online, team-based capture-the-flag cybersecurity challenge hosted by Carnegie Mellon University
- Team placed 2nd in Canada, 14th worldwide out of 7500+ teams

IOAA 2021 | *Bronze Medal (Individual), Gold Medal (Team)* — November 2021
- Competed in 14th International Olympiad on Astronomy and Astrophysics
- Selected for Team Canada as Top 5 student nationwide
- Earned bronze medal for individual performance, gold medal (first in world) for team challenge portion