

William Song

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pojj.github.io/portfolio

github.com/pojj

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SKILLS

Languages: JavaScript, TypeScript, Python, Java, C, C++, SQL, PHP, Racket

Technologies: NextJS, ReactJS, ExpressJS, PostgreSQL, MySQL, MongoDB, TailwindCSS, Bootstrap, Git, Docker, PyTorch, Flask, Selenium, WordPress

EXPERIENCE

National Academy of Sciences Canada

JUNE 2023 - AUG 2023

Full Stack Developer

- Extended the Astra theme with custom functions to manage publications, events, and scientists on a WordPress site.
- Modular design incorporated PHP and Elementor to allow maintenance from both technical and non-technical users.
- Created an administrative dashboard to manage 80+ entries of various content types stored in a MySQL database.
- Registered domains, configured DNS, and deployed the site with SSL to GoDaddy's web hosting services.
- Automated routine tasks including database backups, security checks, and plugin updates using cPanel.

Falcon Technologies

NOV 2022 - DEC 2022

Intern Software Developer

- Optimized license verification speed by 99% for Canadian or American real estate agents and brokers.
- Aggregated data from 6 provinces and 30 states to construct a standardized containerized storage solution.
- Built a data pipeline to collect and parse data of multiple types including csv, xlsx, txt, database, and web formats.
- Scheduled Python and Selenium scripts to periodically retrieve new license information and update records.
- Maintained a database of more than 1 million licensee entries stored in a common searchable format.

Delta Controls

MAY 2022 - JUNE 2022

Intern Software Developer

- Developed a custom web based Applicant Tracking System to improve a company's intake flow.
- Leveraged ReactJS to create a responsive SPA displaying tailored information on 100+ applicants and 10+ job listings.
- Used a PostgreSQL database and an ExpressJS API to handle CRUD operations following best RESTful practices.
- Designed the style guide and collaboratively created the UI/UX for 15+ pages using Figma.

PROJECTS

Macro Tracker

JULY 2024 - AUG 2024

<https://github.com/pojj/macro-manager/>

- Built a full stack web app to log meals and track nutrition, helping users monitor progress and reach dietary goals.
- Utilized the latest NextJS features such as server components, server actions, and nested layouts and routes.
- Developed a custom user authentication module with HS256 JWTs to provide secure individual access.
- Created many-to-many relationships in MongoDB to manage references between 1000+ meals, ingredients, and recipes.
- Used document indexing and ObjectIDs, to quickly search and sort meals by calories, ingredients, or recipe used.

CNN Meal Classification

DEC 2023 - JAN 2024

<https://github.com/pojj/Food-CNN/>

- Deployed an AI model with Flask to return the nutritional information of a dish when provided with an image.
- Trained the CNN using PyTorch and the Food-101 dataset, achieving 81% top-1 and 95% top-3 classification accuracy.
- Tested multiple CNN standards (ResNet, VGG) to determine the most optimal transfer train feature layers.

Wordle Variant (Joustle)

MAY 2022 - JUNE 2022

<https://github.com/pojj/wordle-variant/>

- Built a multiplayer Wordle spin-off inspired by Super Auto Pets and Scrabble with ReactJS, featuring PvP wordplay.
- Animated word combat with CSS animations and used drag-and-drop for user interactivity.
- Implemented Binary Search and the Trie data structure on the english dictionary for fast word validation.

EDUCATION

University of British Columbia

Bachelor of Science | Major in Computer Sciences | 4.0 GPA | Year 3 | Expected Graduation: May 2026