

# William Song

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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

## TECHNICAL EXPERIENCE

### National Academy of Sciences Canada

JUNE 2023 - AUG 2023

Full-Stack Developer

- Developed a WordPress website for a non-profit organization by extending the Astra theme with custom functions.
- Leveraged PHP's speed to server-side render news, events, and publication content from a MySQL database.
- Deployed the website with SSL on GoDaddy's web hosting service and incorporates automatic backups.

### Falcon Technologies

NOV 2022 - DEC 2022

Intern Software Developer

- Built an aggregated database of Canadian and American Real-Estate Agent/Broker licenses.
- Scheduled Python and Selenium scripts to web scrape, parse, and update license information for up-to-date records.
- Set up a pipeline to fetch and standardize license data before storing it into a Dockerized PostgreSQL database.

### Delta Controls

MAY 2022 - JUNE 2022

Intern Software Developer

- Designed and developed a custom Applicant Tracking System to improve a company's outdated intake flow.
- Interactive SPA composed of ReactJS class components, supported by an ExpressJS API and a PostgreSQL database.
- Created a style guide and collaboratively designed the web app's UI/UX using Figma.

## TECHNICAL PROJECTS

### Macro Tracker

JULY 2024 - AUG 2024

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

- Built a full-stack dockerized web app using NextJS that queries a MongoDB database with Mongoose ODM.
- Implements user authorization with JWTs to provide meal tracking, macro counting, and recipe construction.
- Using document indexing, meals can be quickly searched and sorted 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 a CNN using PyTorch and the Food-101 dataset, achieving 81% top-1 and 95% top-3 classification accuracy.
- Transfer trained the model from multiple standards (Resnet, VGG) to determine the most optimal feature layers.

### Wordle Variant (Joustle)

MAY 2022 - JUNE 2022

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

- Made a multiplayer spin-off on Wordle in React where players construct words to battle against other players.
- Utilized CSS animations to render combat and ReactJS drag-and-drop for user interactivity.
- Implemented binary search on the Scrabble dictionary, enhancing word validation speed by 16 000 times.

## EDUCATION

### University of British Columbia

SEP 2023 - MAY 2027

Bachelor of Science - Major in Computer Sciences - 4.0 GPA