

Jamin Yang

Markham, ON

☎ (647) 674-0322 | ✉ jaminyang2000@gmail.com | 📱 jy200

Skills

Languages Python, C, Java, SQL, JavaScript, HTML, CSS, LaTeX,
Technologies Git, Unix, React, React Native, Node.js, Express.js, MongoDB, Bootstrap, jQuery, PyTorch, NumPy, spaCy, Material UI, Heroku, Microsoft Office

Education

University of Toronto

Honours Bachelor of Science, Computer Science

Toronto, ON

September 2018 - June 2022

Volunteering

Mobile App Developer

Ecologic

Toronto, ON

September 2020 - January 2021

- Developed a carbon footprint mobile app for a non-profit organization.
- React Native front-end and a fully specified REST backend using **Express.js** and **MongoDB**.
- Coded a carbon cost calculator in **Javascript** and integrated it into the visual per-monthly graph's **React Native** components.
- Utilized Spoonacular API to accomplish recipe search-up based on inputted ingredient name.
- Implemented a full-stack shopping list and user forum. Additionally created associated integration tests to eliminate frequent bugs.
- Developed the app in an Agile environment with regular standups, sprints, and retrospectives.

Projects

ext2 File System

C | Operating System Implementation

2022

- Personal implementation of a ext2 file system for the Linux kernel that can be run using the FUSE interface.
- Developed file operations including directory or file creation, deletion, truncation, moving, linking, writing, and reading.

Othello AI Bot

Python | Made an Othello AI program where users can play against the AI or run the game with two AI players

2022

- The AI makes a list of possible moves based on current or future board states and chooses the best move based on its scoring heuristic.
- Developed AI move selection using the Minimax algorithm, alpha-beta pruning technique, and strategies specific to Othello.

Identification of Political Leaning on Reddit

Python | Machine Learning project to analyze political alignment of Reddit comments.

2022

- Built a machine learning model in **Python** to predict a Reddit user's political alignment through their text comments.
- Sourced the data by scraping comments (2 GB) from popular political subreddits and sorting by Left, Center, Right, or Alt alignment.
- Accomplished data pre-processing through Regex expressions and spaCy operations.
- Model extracts more than 100 features such as number of pronouns, verbs, nouns, and adverbs.
- Achieved an accuracy of 48% when tested against a mix of 20,000 political Reddit comments.

Word sense disambiguation (WSD)

Python | Machine Learning and Natural Language Processing (NLP) Word Tagging Project

2022

- Developed machine learning models in **Python** that aim to predict the correct context of an ambiguous word in a sentence. Tests were done on thousands of sentences sourced from a UD English tree-bank.
- Devised an initial algorithm that selected the most frequent word sense out of all possible contexts.
- Created a higher-accuracy BERT deep-learning model that remembers previous sentence context. The BERT model predicted the correct sense for nearly 50% of ambiguous sentences and had reduced run-time compared to some prior models.