

Felix Zhou

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EDUCATION

The University of Western Ontario

Honours Specialization in Computer Science, Major in Mathematics

London, ON

Sept. 2023 – Apr. 2027

PROJECTS

Active Quest | *Java, JavaScript, HTML, CSS, MySQL*

Feb 2023 – Present

- Objective: To develop a cutting-edge fitness app that integrates socializing and friendly competitions, driving user engagement and motivation towards achieving their fitness goals.
- Spearheaded and directed the entire planning and development process of the Active Quest fitness app, ensuring a seamless and successful implementation from inception to completion.
- Engineered a robust data infrastructure by integrating MySQL as the database management system for Active Quest, enabling efficient and reliable storage and retrieval of user data to deliver a seamless user experience.
- Implemented real-time data updates through advanced WebSocket technologies within Active Quest, allowing users to receive instant and dynamic updates, enhancing their engagement and interaction with the app.
- Utilizing caching mechanisms, database indexing, and code optimization techniques to ensure rapid loading times, smooth user interactions, and optimal resource utilization, elevating the app's performance to unmatched levels.

Number Reader Machine Learning Model | *Python, Tensorflow, Numpy, Keras*

June 2023 – July 2023

- Developed a sophisticated image classification neural network model using Python, leveraging popular libraries like TensorFlow, NumPy, Matplotlib, Keras, and OpenCV.
- Employed NumPy and OpenCV to preprocess the dataset. This step included resizing, normalization, and data augmentation to ensure the neural network receives clean, standardized inputs, and reduces the risk of overfitting.
- Utilized TensorFlow's flexible options for hyperparameter tuning, such as learning rate, batch size, and number of epochs. Conducted systematic experimentation to optimize the model's performance while avoiding common issues like vanishing gradients or exploding gradients. The model's final accuracy as a result of fine-tuning was 98%

University Browsing App | *Java, JavaScript, HTML, Google Maps API, Geolocation API*

Nov 2022 – Jan 2023

- Objective: To develop a sophisticated app that empowers users to effortlessly locate nearby universities, providing seamless access to valuable educational resources.
- Spearheaded the conceptualization and implementation of an innovative app, employing cutting-edge technologies to enable users to find the three closest universities based on various inputs, including Geocoordinates, GPS Coordinates, and address inputs.
- Utilized Java FX to create a dynamic and user-friendly client-side application, hosting a feature-rich browser interface that seamlessly interacts with user inputs, offering an unparalleled browsing experience.
- Engineered a robust and efficient algorithm to process diverse input formats, swiftly identifying and displaying the three nearest universities, enhancing user convenience and accessibility to educational institutions.

Productivity Health App | *Java*

Feb 2023 – April 2023

- Objective: Develop and implement a comprehensive productivity health app focused on enhancing high school students' attention span and optimizing study outcomes.
- Utilized Java Swing to architect the user interface, devising a customized project layout within Java to meticulously design and refine project elements.
- "Engineered a versatile interface enabling users to execute diverse actions, encompassing file storage, printing, reopening, and file sharing, all seamlessly orchestrated through Java."
- Crafted a cutting-edge Java Swing interface as the cornerstone of an intricate productivity health framework, fostering academic success by enabling students to adopt personalized study strategies, increasing their attention spans by 20%, and achieving an exceptional 90% user satisfaction rate.

TECHNICAL SKILLS

Languages: Java, Python, C++, SQL (MySQL), JavaScript, HTML/CSS

Developer Tools: Git, Github, Atom, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Android Studio, CLion, MySQL Workbench, Command Prompt

Libraries: Apache, Tensorflow, Matplotlib, Keras, NumPy, PyTorch, OpenCV, Bootstrap

GUI/Design: Photoshop, Pixlr, Figma

Interests/Hobbies: AI/ML, Data Science, Mathematics, Gym, Music, Coffee, The Borderlands Franchise