

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

EXPERIENCE

InnovOak

Feb. 2023 – Present

Co-Founder

Markham, ON

- Spearheaded and directed the planning and development process of the Active Quest fitness app, ensuring a seamless and successful implementation by directing a team of over **20** developers from inception to completion, which resulted in a **30%** increase in project completion rate.
- Built a robust and scalable architecture for the Active Quest platform by integrating MySQL as the database management system, enabling efficient and reliable storage and retrieval of data to deliver a seamless user experience.
- Implemented real-time data updates through advanced WebSocket technologies within Active Quest, increasing user engagement and interaction by **100%**, allowing users to receive instant and dynamic updates, enhancing their engagement and interaction with the app.

PROJECTS

Phish Net | *Python, PyTorch, Scikit, Transformer, Numpy, Matplotlib, Node.js*

August 2023 – August 2023

- Fine-tuned the pre-trained RoBERTa transformer model to detect phishing emails from safe emails, using the accuracy metric and the precision, recall, and F1 score metrics, by first training the model and then evaluating the model.
- Used the PyTorch library to convert the training dataset from strings into tensors which could then be interpreted by the model, reducing training time by **60%** and improving accuracy by **5%**.
- Improved the Phish Net model by using the AdamW optimizer to adjust the learning steps and learning rate, the final evaluation accuracy was **98%**.
- Implemented a Decision Tree algorithm to improve the accuracy of the predictive model from **85%** to **92%** using AUC, ROC, and the F1 score as metrics.

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 for implementation and achieving highly accurate results.
- Utilized NumPy and OpenCV for dataset preprocessing, encompassing resizing, normalization, and data augmentation. Enhancing the neural network's input quality and reducing the potential for 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

- 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.

TECHNICAL SKILLS

Languages: Java, Python, 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: Tensorflow, Matplotlib, Keras, NumPy, PyTorch, OpenCV

UI/Design: Photoshop, Pixlr, Figma

Frameworks: Node.js, Bootstrap, Express.js