HARRY ZHU

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TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Java, C/C++, HTML/CSS, SQL
Frameworks/Libraries: React, Next.js, Express.js, Node.js, Flask, Pandas, Numpy, Tensorflow, MediaPipe, OpenCV, SQLite
Developer Tools: Git, GitHub, Maven, Firebase, VS Code, PyCharm, Eclipse, Juypter Notebook, Google Colab, Vercel

EXPERIENCE

Assistant Surveyor   July 2023 – Aug. 2023
P & C Surveying Inc.   *Toronto, ON*
- Assisted in utility pole survey jobs performing profiling and GPS positioning.
- Participated in field surveys and operated survey instruments and devices.
- Assisted in the calculation, analysis, computation of measurements obtained during field surveys, and kept records, measurements and other survey information in systematic order.

Waiter   April 2023 – July 2023
Magic Noodle   *Toronto, ON*
- Maintained awareness of table turnover and the dining room's flow to provide efficient service to all customers.
- Took orders accurately and efficiently, considering dietary restrictions, preferences, and special requests.
- Worked as a team player, supporting colleagues during service to ensure a consistent guest experience throughout the restaurant, including serving food, refreshing beverages, cleaning and resetting tables.

Leukemia and Lymphoma Society   2019 – 2022
Volunteer   *Toronto, ON*
- Assisted in setting up major large-scale fundraisers such as the Light the Night Walk, a fundraising and awareness campaign to help fight against all blood cancers, raising over $5.5 million.
- Organized and cataloged paperwork and sorted various receipts in a systematic order.

PROJECTS

FinTrack | *Next.js, React, TypeScript, Flask, Python, Firebase*   [GitHub]
- An equity analysis full-stack web application providing comprehensive analytics into market activity, engineered with **Next.js**, **React**, and **Tailwind**, adhering to Google's Material Design 3 **UI/UX** design language and framework.
- Architected a financial **REST API** with **Flask** to deliver in-depth equity analytics including historical price data, key financial metrics, and current news analyzed with **FinBERT**, a pre-trained natural language processing model to analyze sentiment of financial text developed by **ProsusAI**.
- Leveraged **web scraping** using **BeautifulSoup** to scour the internet for the most up to date news and to provide in-depth descriptions and details for each security.
- Implemented **Google's Firebase** backend service for authentication and **Cloud Firestore** for its cloud database allowing for personalized watchlist making.

Hands-on Fluency | *React, JavaScript, Flask, Python, Tensorflow, OpenCV, MediaPipe, SQLite*   [GitHub]
- Developed a sign language learning platform as a web application, during the NewHacks hackathon, that teaches and quizzes the user on content using their webcam with **OpenCV** and **MediaPipe**.
- Leveraged **Jupyter Notebook** and **Tensorflow** to design and implement a **CNN (Convolutional Neural Network)** for hand gesture recognition, resulting in a **61% accuracy** across over **30 distinct classes**.
- Designed a **REST API** backend using **Flask** to seamlessly integrate a user-friendly **React** and **Tailwind** frontend interface along with the **SQLite** database for user authentication and the hand guesture recognition model.

AI Music Recommendions | *React, JavaScript, ExpressJS*   [GitHub]
- Constructed a full-stack web application, designed with an interactive frontend using **React** and **Tailwind**, generating music recommendations using **GPT 3.5 Turbo** given the user's Spotify listening data.
- Utilized Spotify **OAuth 2.0** framework and **Web API** to retrieve the user's data including most listened tracks and artists.
- Developed an **ExpressJS** backend integrating the **OpenAI API** with the frontend to generate the music recommendations.

Stock News Sentiment | *TensorFlow, Pandas, Numpy*   [GitHub]
- Developed a **NLP** (Natural Language Processing) model to analyze the sentiment of financial text.
- Powered by a **LSTM** (Long Short-Term Memory) recurrent neural network with **over 88% accuracy** and trained with **over 5,000 unique headlines** relating to various securities or the overall stock market.

EDUCATION

University of Waterloo   Waterloo, ON
Honours Bachelor of Mathematics/Business Administration   *Sept. 2023 – May 2028*
- **William D. Packham Scholarship**: Excellence in high school academics (**96.5%** average **IB Diploma**) and extracurricular involvement including qualifying for city and provincial swimming competitions (OFSSA).
- **President's Scholarship of Distinction**: Excellence in high school academics, achieving greater than 95% average.