ETHAN RONG

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EDUCATION
University of Western Ontario | 3.74 Cumulative GPA (87.0%) **2022-2027**
Bachelor of **Computer Science** Honors; **Ivey** Advanced Entrance Opportunity (AEO)

WORK EXPERIENCE
Ontario Ministry of Transportation (MTO) **Toronto, Ontario**
Project IT Assistant May. 2023 – Present
- Collaborated with fellow interns on the creation of a streamlined incident management system for MTO's Integrated Application Support Team (IAST) through the use of **PowerBI** and **Microsoft DevOps**, ensuring smooth coordination and implementation
- Led a development team of nine interns tasked with creating a resume ranking AI model to assist hiring decisions using **natural language processing (NLP)** techniques such as **Word2Vec** and **lemmatization/stemming** through the use of a **Convolutional Neural Network** and the **k-nearest neighbor algorithm** in **Tensorflow**; model achieved a classification accuracy of **88.7%**
- Optimized AI model performance by utilizing **hyperparameter** turning with the **keras-tuner** library with **random and grid search**

LinkedKey Education Centre **Oakville, Ontario**
Model UN Instructor and Former Teaching Assistant (TA) Dec. 2020 – Present
- Lectured on subjects like **international diplomacy and relations** in weekly classes; met with fellow coaches bi-weekly to provide a **consistent classroom experience** and developed a universal curriculum which **increased student signups by 35%**
- Coached over **30 junior-level competitors** for international level MUN conferences in areas such as background research, resolution writing, and speech delivery; efforts resulted in **six junior-level competitors** placing at international competitions

PROJECTS
Nourish-Now | Tensorflow/Keras, Pandas, Numpy *https://devpost.com/software/norishnow*
- Developed a web app using **React JS**, utilizing a **Long-Short-Term-Memory (LSTM)** neural network model to enable charity donors and policy-makers to forecast future demand and costs for the Women Infant Children (WIC) food program in the US
- Performed **data cleaning and normalization** on a dataset with **7,500 data points**, cumulating in an accuracy score of **over 90%**
- Incorporated a recipe recommendation feature which produces recipes based on local food scarcity levels through **GPT-3 API**; presented to Community Food Centre Canada at **Maple-Hacks 2023**, leading to **2nd place** in the Zero Hunger Hack category

Spotify Bot | Flask, React-JS, Tailwind CSS, MySQL *https://github.com/ethan-rng/spotifyBot*
- Coded a solo **full-stack web-app** which downloads songs in a Spotify playlist as a local .mp3 files by using **Spotify SDK** and **YouTube API**, while displaying songs and playlists on a **React-JS** front-end created using tools such as **Tailwind CSS** and **Vite**
- Utilized **Flask** to develop a robust backend **RESTful API** to handle **CRUD** requests from front-end users to a back-end database
- Employed **MySQL** to store meta-data and user preferences to make song recommendations with the **k-means clustering algorithm**

Hover-Touch | Python, OpenCV, Google Cloud Platform (GCP), GitHub *https://devpost.com/software/hovertouch*
- Exhibited a video-to-text/speech technology made with **Python** and **OpenCV**, which enables non-verbal individuals to communicate through air-written messages on video technology at **Hack Western 9**, resulting in **4th out of 80** teams overall
- Combined hardware-system made using an **Arduino Nano** with software elements such as **GCP Vision** and **Text-to-Speech API** to perform real-time hand tracking and optical character recognition (OCR), with a tested **accuracy score of 98.3%**

EXTRACURRICULARS
Western Founders' Network (WFN) **London, Ontario**
Vice President (VP) and Former Director of Projects Sep. 2022 – Present
- Managed **strategic planning** for WFN's project portfolio through road-mapping portfolio goals across the year and set out comprehensive deliverables for directors to create a final software-based project at the end of the academic school year
- Provided valuable **hands-on technical expertise** and experience to a group of five first-year directors on various project tasks and coordinated with fellow VPs through bi-weekly meetings to sync project timelines and demo days for all project teams in WFN

Global Research Consulting Group (GRC) **London, Ontario**
Junior Consulting Analyst Sep. 2022 – Jan. 2023
- Consulted with an international non-profit by providing valuable **environment social governance (ESG)** insights through conducting a **three-month long research process** alongside organizing for an ESG conference involving external guest speakers
- Spearheaded efforts in **researching contemporary green practices** for the client in areas such as carbon offset and locating alternative "green" sponsors/grants to **diversify client's funds** to meet client-set sustainability goals

AWARDS
- *Hackathons* – **4th Out of 80 teams** at Hack Western 9 | **2nd Out of 30 participants** at MapleHacks 2023
- *Case Competition* – **2nd Place Out of 30 teams** at WFN's Technology Consulting Competition 2023
- *Product Design* – **2nd Place Out of 35 teams** at WFN's Product Design Sprint Competition 2023