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Summary of Qualifications

- Technical skills include machine learning, software development, mechanical design, technical documentation, and robot development
- Experience using and developing machine learning algorithms in real-world applications through research positions and co-ops
- Software development experience gained throughout high school and university (Python, Java, C++)

Education

Candidate for Bachelor of Applied Science / University of Waterloo / Waterloo, ON / Sept. 2019 – April 2024

Relevant Experience

Machine Learning Engineer / Butter Data / New York, NY / April. 2023 – July. 2023

- Created an AI investor analysis tool for startups using OpenAI's embedding model, allowing for analysis of portfolios of various VCs to find similarly aligned competitors, with individual company analysis cost less than \$0.005.
- Trained a Hugging Face image detection model to analyze visual segments of a web page for marketing use, reaching an IoU of 0.7.
- Deployed a Python-based file configuration tool, allowing for real-time file visualization and editing, flexible file selection, and one-click creation of JSON configuration files based on selected files.

Junior Backend Software Engineer / Pronti AI / Kitchener, ON / Sept. 2022 – Dec. 2022

- Developed a colour mapper in Python to find a chosen colour's closest neighbour in a given colour set, removing redundant colours and improving user experience by reducing visual clutter
- Implemented a content filter in Python to verify uploaded images did not violate terms of service, enhancing app security
- Created an exporting app in Python to fetch data from Mixpanel and Quickbooks API endpoints based on a selected date, reducing administrative delay by 60% while adhering to OAuth2 requirements and principles
- Deployed an open-source localization platform using Docker and Google Cloud Platform to aid in internationalization of apps
- Added a feedback system in Javascript to scrape an authorized user's inbox for relevant emails and parse the data into a Google Sheet, allowing for quicker identification of user-reported bugs

Data Analyst Assistant / Shenzhen Lanshi Institute of AI in Medicine / Shenzhen, China / Jan. 2022 – April 2022

- Analyzed data and generated a predictive model for prognostic gene signatures and Tumour Mutational Burden (TMB) using machine learning algorithms (LASSO regression, univariate and multivariate COX regression analyses) in R and Perl, resulting in creation of a gene signature for hepatocellular carcinoma
- Developed a k-nearest neighbours algorithm in R to clean 24,000 data entries from the International Cancer Genome Consortium for analysis
- Published this research in the journal "Frontiers in Immunology" under the title "Construction of a lipid metabolism-related risk model for hepatocellular carcinoma by single cell and machine learning analysis"

Research Assistant / Research Apprenticeship, Dr. Xiao Yu Wu / Waterloo, ON / Jan. 2021 – Dec. 2021

- Helped construct a Markov Chain Monte Carlo energy consumption model in VBA and Python simulating activity and heating loads for 1,000 consumers over 8,760 hours (one year), presenting the findings and the model at the International Green Energy Conference in July 2021
- Significantly improved the accuracy of the per-day simulation to within 5% of verified values
- Currently working on publishing a paper in the International Journal of Green Energy based on this research