Brendan Hu

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Work Experience

Software Engineer, Freelance Jun. 2024 - Present
DataAnnotation *Remote*

- Engineering prompts and assessing responses from LLMs according to a set of rating dimensions.
- Validating LLM-generated Python, Rust, and C++ code, ensuring accuracy and use of best practices.

Software Engineer Jan. 2023 - Aug. 2023
Intellijoint Surgical *Kitchener, ON*

- Developed models and services in Swift and Objective-C, following clean code architecture and the MVVM design pattern on an Agile team.
- Updated critical measurement features, leveraging modern features from SwiftUI and Combine.
- Completed 30% of project tickets for overhauling a key system, resulting in successful completion.

Image Processing Developer Jan. 2022 - Apr. 2022
Teledyne DALSA *Waterloo, ON*

- Cross-functional teamwork to develop image processing algorithms for upcoming cameras.
- Revised Python test bench to produce EMVA compliant characterization data for newly developed sensors, with extensive use of libraries including NumPy, Matplotlib, and pandas.
- Optimized camera saturation test using an adaptive searching method to decrease run time by 2 hours.

Performance Engineer Sept. 2021 - Dec. 2021
NCR Canada *Waterloo, ON*

- Developed JMeter scripts to benchmark REST API performance, increasing code coverage by 12%.
- Utilized scripts as Docker images to run distributed tests on Kubernetes clusters.

Connectivity Software Tester Jan. 2021 – Apr. 2021
Ford Motor Company of Canada *Oakville, ON*

- Maintained automated performance tests on Testrail, using Python, Selenium, Jenkins, and Jira.
- Reduced variance in throughput speeds for automated test cases by 20%.

Projects

Neural Network PES Research Jan. 2024 – Oct. 2024

- Leveraged TorchANI (Python) to train a neural network to determine the potential energy surfaces of organic molecules.

LA Times Search Engine Sept. 2023 – Dec. 2023

- Developed a search engine to retrieve information from an archive of the LA Times, using Python and implementing BM25 as the search algorithm.

UWAFT EcoCAR Design Team: Connected Software Sept. 2019 – Sept. 2023

- Collaborated with a design team to enhance the human-machine interface (HMI) of a Chevy Blazer, applying software development skills in Python and C++ to improve user experience and functionality.

Education

University of Waterloo Waterloo, ON
BASc, Honors Nanotechnology Engineering *Sept. 2019 – Apr. 2024*