Edward Hedi Lu

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Summary

- Passionate about developing C++ and Python modules for deep learning
- Solid experience in developing industry web apps during first co-op term

Education

Sep. 2015—May 2020 **University of Waterloo -** *Honours Computer Science (BCS)*, 3.8 GPA

Skills

Languages: C++, C, Python, JavaScript, Ruby, R, HTML, CSS

Tools: TensorFlow, Keras, Caffe, Flask, React, jQuery, Node, Express, Rails

Experience

May 2016—Aug. 2016 **Ontario Institute for Cancer Research -** *Frontend Web Developer*

- Worked on multiple projects including a survey builder platform, a network for pathology researchers and event management tools
- Developed new reusable UI components for the wireframe UI library
- Designed and implemented frontend features using React, Redux, jQuery and CSS and backend modules using Node, PHP and MySQL
- Worked in an agile development environment, consistently produced deliverables ahead of schedule and earned an Outstanding evaluation

Projects

Jan. 2017 **Number Identifier -** *Deep learning web app for digit identification*

- Developed C++ extensions for TensorFlow implementing penalized activation functions and their gradients based on recent research papers
- Trained deep convolutional neural nets and obtained 85% test accuracy on the Street View House Numbers dataset
- Extracted weight sets from trained nets, built prediction models into a Flask server and created a jQuery interface that lets users upload photo data and obtain predictions

Dec. 2016 **C++ Neural Net -** *Implementation of a deep neural network*

- Wrote a dependency free NeuralNet class that allows for an arbitrary number of layers with any number of nodes specified from a single vector

Nov. 2016 **The Mixing Pot -** *Web game about finding combinations of ingredients*

- Scraped and parsed 200,000 recipes and their ingredients from BBC
- Built a responsive web game that allows users to add ingredients and calculates scores based on the probability of them appearing together