Ruifan Yu

LinkedIn: ruifan-yu   **Email**: ruifan.yu@uwaterloo.ca   **Tel**: 519-497-6460

Education

Computer Science, M.Math Co-op Program – University of Waterloo, Canada   2016 – present

GPA: 90 / 100   TA for Intro to CS, Functional Programming, Numerical Computation
Main Courses: Deep Learning, Big Data Infrastructure, Convex Optimization,
                  Statistical Learning, Reinforcement Learning, Search and Recommendation

Computer Science, Exchange Program – Lund University, Sweden   2014 – 2015

GPA: 3.8 / 4.0
Main Courses: Advanced Algorithm, Computer Graphics, Computer Network

Artificial Intelligence, Bachelor of Engineering – Xiamen University, China   2011 – 2015

GPA: 88 / 100   Rank: 2 / 53
Main Courses: Machine Learning, Algorithm, Programming, Operating System, Math

Experience

Research Assistant – University of Waterloo   2018.01 – present

ITSS Lab, Civil Engineering. Supervised by Prof. Liping Fu

- Developed a web-app for Transport Canada intended for crossing inspections.
  (Project URL: https://gradex-itss.firebaseapp.com)
- Implemented winter road condition monitoring based on road camera data:
  transfer learning in multi-camera data; segmentation interpretability for classification result.
  Paper: (TRB 2018) *Winter Road Surface Condition Recognition Using a Pre-trained Deep Convolutional Neural Network* (URL: https://trid.trb.org/view/1494597)

Data Scientist Intern – Thomson Reuters   2017.05 – 2017.08

Thomson Reuters Labs, Waterloo Region. Directed by Brian Zubert

Worked as full stack developer on content generation pipeline: handled the government files from lawyers; provided the data management system and OCR service. This project realized a savings of over $100,000 per year and resulted in a corresponding change in law to support cleaner submission of data to the regulator.

- Developed API for similar cases retrieval by ElasticSearch and Open Information Extraction
- Implemented Bi-LSTM-CRF model for Named Entity Recognition(NER)

Computer Vision Engineer Intern – Tencent Ltd, China   2015.11 – 2016.03

Face Recognition Group, Youtu Lab. Directed by Dr. Shaoxin Li

- Implemented a Siamese-CNN model with unsupervised dataset for Face Verification
  Set the pipeline of dataflow which includes cropping, aligning, and facial keypoints detection

Machine Learning Engineer Intern – Mogujie Ltd, China   2015.07 – 2015.09

Search Rank Group, Algorithm Department. Directed by Qiyou Huang

- Processed the search text and analyzed in user search history by n-gram
- Derived a model that detected new Chinese terms based on Context Entropy
- Implement a ranking system using BM25 algorithm, Word2Vec

Personal Project

- ICLR 2018 Reproduction Challenge (reproduced PixelDefend paper)
- Kaggle seizure prediction
- Kaggle Tensorflow Speech Recognition Challenge
- Tiny Deep Learning framework with GPU supported and Autograd module