Ruifan Yu

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Education

Computer Science, MMath Co-op Program – University of Waterloo   2016 – present

GPA: 91 / 100   TA for Intro to CS; Functional Programming; Numerical Computation
Main Courses: Deep Learning, Big Data Infrastructure, Convex Optimization,
                 Statistical Learning, Optimization for Machine Learning

Computer Science, Exchange Program – Lund University   2014 – 2015

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

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

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

Experience

Research Assistant – University of Waterloo   2018.01 – present

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

- Developed the web-app for Transport Canada about crossing inspections.
- Implemented computer vision model for winter road classification based on road camera data.

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: handling the government files from lawyers;
providing the data management system, and OCR service; building docker image for deployment.
This project realized a savings of over $100,000 per year and increased content coverage of the given area
from ~10% to near 100%. Furthermore, it also resulted in a corresponding change in law to support cleaner
submission of data to the regulator.

- Built the webserver on AWS based on Flask and Vue.js
- Developed API for similar cases retrieval by EleasticSearch 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

- Designed and Implemented a Siamese-CNN model with unsupervised dataset for Face Verification
- Set the pipeline of dataflow which includes cropping, aligning, and facial keypoints detection
- Set up and maintained the Hadoop cluster for data processing

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

Search Rank Group, Algorithm Department. Directed by Qiyou Huang

- Analyzed data 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

Skills

Python(Tensorflow, PyTorch, Keras, Numpy, Pandas, Scikit-Learn, Jupyter), C++(Caffe),
Java, Scala(Apache Hadoop, Apache Spark), Javascript(Vue.js), Docker, Git, Bash