

Moshi Wei

Email: wmswms938@gmail.com

Github: <https://github.com/Moshiiii>

Python, MySQL, Machine learning

Experience

Software Engineer – Business Intelligence, Achievers May. 2019 – Present

- Created recommender system that recommend user who to @ in social network by applying **Sentence Clustering** and **Collaborative Filtering** based on the relevance between message and user
- Reduced data warehouse restoration time by **24 times** compared with the previous version by restructuring workflow using **PostgreSQL**
- Increased global **ETL** loading speed by **16%** by rewrite batch loading API using **Python**
- Created interactive network visualizations for member in social network using **Networkx** and **Pyvis**
- Developed the next generation ETL framework using **Python**, **Redis**, **Docker** and **Airflow**

Project: Machine learning based Algorithmic trading research May. 2019 – Present

- Run a RBC mutual fund portfolio with **9.5%** annual return by analysing performance data using **Python**

Master Research Assistant, University of Waterloo Dec. 2017 – Sep. 2019

- Increased the accuracy of Automated Program Repair model on Quixbugs benchmark by **240%** by proposing novel approach using **Pytorch** NMT model with **CRNN** layer and code mutation templates
- Reduced the encoder and decoder dictionary size from **50000+** to **200** tokens and also training time from **100+** hours to **20** hours by creating novel **NMT** architecture
- Created road slippage detection model with **81%** accuracy using **VGG16** model and **OpenCV**

Software Developer, AVG Technologies May. 2016 – Aug. 2016

Full-Stack Developer, Mitel Sep. 2015 – Dec. 2015

Full-Stack Developer, PDCI Market Access May. 2015 – Aug. 2015

Web Developer, Aboriginal Affairs and Northern Development Canada Apr. 2014 – Dec. 2014

Awards

-
- Received **Full Tuition Scholarships** for Uwaterloo MSc. Software Engineering program
 - Received **A+** on Milestone project: AR based Poke-Mon Go using OpenCV and Unity3D
 - Selected as the **1st place** out of **50** participants for the Twitter sentiment analysis competition in university of Ottawa for highest model accuracy
 - Achieved **top 4%** out of **100** participants for linear kernel MNIST digits recognition challenge with **98.8%** model accuracy using fine-tuned **K-means** model

Education

-
- **University of Waterloo**, Master of Computer Software Engineering **Dec 2017 – Sep 2019**
 - **University of Ottawa**, Bachelor of Computer Science, Honner with Co-op **Sep 2012 – Dec 2017**

Publications

-
- Abstraction Mechanism on Neural Machine Translation Models for Automated Program Repair
Author: Moshi Wei, Lin Tan Sep 23rd 2019
 - Ensemble Learning using Convolution Neural Machine Translation for Automatic Program Repair
Author: Thibaud Lutellier, Lawrence Pang, Viet Hung Pham, Moshi Wei, Lin Tan Jun 20th 2018