# Moshi Wei

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Blog: moshiii.github.io/cv/
Python, NLP, Machine learning

## Experience

**Software Researcher -** Software engineering, York University          Sep. 2020 - Now

- ASE 2021 (under review):   CLEAR: Contrastive Learning for API Recommendation
- ESEM 2021 (under review): Yet Another Combination of IR- and Neural-based Comment Generation
- ICSME 2021 (under review): CoCoFuzzing: Testing Neural Code Models with Coverage-Guided Fuzzing
- ICSE 2021 (accepted): Automatic Unit Test Generation for Machine Learning Libraries: How Far Are We?
- ISSTA 2020 (accepted): CoCoNuT: Combining Context-Aware Neural Translation Models using Ensemble for Program Repair.

**Software Engineer** – Business Intelligence, Achievers          May. 2019 – Sep. 2020

- Awarded project: Named Entity Recognition (NER) system highlighting Date, Name and Event using Spacy
- Created a recommender System that recommend nominees to the poster in social networks by Collaborative Filtering based on the relevance between message and user
- Reduced TeraByte-level ETL 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 a graph visualization of employee community for user influence Perdition and analysis using Python, Networkx and Pyvis

**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 seq2seq NMT model with CRNN layer and code mutation templates
- Reduced the encoder and decoder dictionary size from 50000+ to 200 tokens and training time from 100+ hours to 20 hours by creating novel NMT architecture

## Awards

- Full Scholarships for York University  Ph.D. Software Engineering program          Sep 2020
- Best Hackathon Project Award at Achievers: ML-based Recommender system          Jan 2020
- Full Scholarships for Uwaterloo MASc. Software Engineering program          Jan 2019

## Education

- York University, PhD in Electrical Engineering & Computer Science          Sep 2020 – Now
- University of Waterloo, Research Master of Software Engineering          Dec 2017 – Sep 2019
- University of Ottawa, Bachelor of Computer Science, Horner with Co-op   Sep 2012 – Dec 2016