

Wei Fang

PHD STUDENT AT MIT CSAIL

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Research Interests

I am generally interested machine learning for natural language and speech, in particular learning and analyzing language representations, language understanding, and transfer learning for NLP.

Education

Massachusetts Institute of Technology (MIT)

Cambridge, USA

PHD STUDENT

Sep. 2018 - PRESENT

- Computer Science & Artificial Intelligence Laboratory (CSAIL), Advisor: Dr. James Glass

National Taiwan University (NTU)

Taipei, Taiwan

BACHELOR OF SCIENCE IN ENGINEERING

Sep. 2013 - Jan. 2018

- Department of Electrical Engineering, GPA: 4.16/4.3

Experience

Spoken Language Systems Group, MIT CSAIL

Cambridge, USA

RESEARCH ASSISTANT, SUPERVISED BY DR. JAMES GLASS

Sep. 2018 - PRESENT

- Worked on automatic fact-checking, including the subtasks of document retrieval and stance detection. [NAACL-2019-Demo] [EMNLP-2019-Workshop]
- Worked on end-to-end speech synthesis.

Natural Language Processing Team, Apple Inc.

Cupertino, USA

NLP INTERN

Jul. 2018 - Aug. 2018

- Research internship on NLP Team.

Vision & Learning Lab, NTU & Academia Sinica

Taipei, Taiwan

UNDERGRADUATE RESEARCHER, SUPERVISED BY PROF. YU-CHIANG FRANK WANG

Jul. 2016 - Jan. 2018

- Proposed a deep learning architecture that incorporates knowledge graphs for multi-label zero-shot recognition. [CVPR-2018]
- Helped review conference papers for ICME 2017 and ICCV 2017.

Natural Language Processing Team, Apple Inc.

Cupertino, USA

NLP INTERN

Jun. 2017 - Sep. 2017

- Researched on input representations for neural networks to improve keyboard experience for users.

Speech Processing & Machine Learning Lab, NTU

Taipei, Taiwan

UNDERGRADUATE RESEARCHER, SUPERVISED BY PROF. HUNG-YI LEE & PROF. LIN-SHAN LEE

Sep. 2015 - Jun. 2017

- Proposed a hierarchical attention-based model for the TOEFL Listening Comprehension Test by machine. [SLT-2016] [TASLP-2019]
- Researched on unsupervised audio word embeddings and helped develop a demo system.

National Taiwan University

Taipei, Taiwan

TEACHING ASSISTANT

Feb. 2016 - Jun. 2017

- EE5177/EE5184 Machine Learning (Fall 2016/Spring 2017) - Instructor: Prof. Hung-Yi Lee
- CSIE5610 Data Analytics & Modeling (Fall 2016) - Instructor: Prof. Biing-Hwang Juang (GaTech)
- EE2011 Signals and Systems (Spring 2016) - Instructor: Prof. Lin-Shan Lee

Publications

- [1] **Wei Fang**, Moin Nadeem, Mitra Mohtarami, James Glass. "Neural Multi-task Learning for Stance Prediction". *To appear in EMNLP-IJCNLP Workshop on Fact Extraction and VERification*, 2019.

- [2] **Wei Fang**, Yu-An Chung, James Glass. “Towards Transfer Learning for End-to-end Speech Synthesis from Deep Pre-trained Language Models”. *Technical Report*, 2019. [\[link\]](#)
- [3] Chia-Hsuan Lee, Hung-Yi Lee, Szu-Lin Wu, Chi-Liang Liu, **Wei Fang**, Jui-Yang Hsu, Bo-Hsiang Tseng. “Machine Comprehension of Spoken Content: TOEFL Listening Test and Spoken SQuAD”. *To appear in IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, 2019. [\[link\]](#)
- [4] Moin Nadeem, **Wei Fang**, Brian Xu, Mitra Mohtarami, James Glass. “FAKTA: An Automatic End-to-End Fact Checking System”. *In Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2019. [\[link\]](#)
- [5] Chung-Wei Lee[†], **Wei Fang**[†], Chih-Kuan Yeh, Yu-Chiang Frank Wang. “Multi-Label Zero-Shot Learning with Structured Knowledge Graphs”. *In IEEE Conference on Computer Vision & Pattern Recognition (CVPR)*, 2018. [\[link\]](#)
- [6] **Wei Fang**[†], Jui-Yang Hsu[†], Hung-Yi Lee, Lin-Shan Lee. “Hierarchical Attention Model for Improved Comprehension of Spoken Content”. *In IEEE Workshop on Spoken Language Technology (SLT)*, 2016. [\[link\]](#)

† indicates equal contribution

Honors & Awards

EECS Great Educators Fellowship , MIT EECS	Feb. 2018
Dean's List (3 times) , NTU Electrical Engineering	Fall '14, Spring '15, Fall '16
Conference Grant , Foundation for the Advancement of Outstanding Scholarship	Dec. 2016
Winner of Smart Life Track (out of 160 teams), 2016 HackNTU Hackathon	Aug. 2016
3rd Place (Problem B), CAD Contest 2015 at IEEE/ACM Int'l Conf. on Computer Aided Design (ICCAD)	Nov. 2015
6th Place (out of 250 teams), 2015 HackNTU Hackathon	Aug. 2015

Skills

Languages	Python, C++, Shell scripting, Matlab
Libraries/Toolkits	PyTorch, Tensorflow
OS	GNU/Linux (Ubuntu & Arch Linux), Mac OSX
Other	Git, \LaTeX