Wei Fang

PhD Student at MIT CSAIL

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Research Interests

Natural language and speech processing, machine and deep learning, and artificial intelligence.

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*
- Working on automatic fact-checking, including the subtasks of document retrieval and stance detection. **[NAACL-2019-Demo]**
- Working 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] 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]

[2] Moin Nadeem, **Wei Fang**, Brian Xu, Mitra Mohtarami, James Glass. "FAKTA: An Automatic End-to-End Fact Checking System". *To appear in Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2019.

[3] 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]

[4] **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

Activities

Vice Director of Academic Department, Student Association of NTU Electrical Engineering   *Jun. 2015 - Sep. 2016*
- Arranged academic activities such as talks, course selection, and workshops.
- Co-organized the 1st MakeNTU, a hardware hackathon for NTUEE students in May 2016.