

Education

Carnegie Mellon University

PH.D. IN LANGUAGE AND INFORMATION TECHNOLOGY

• Advisors: [Prof. Eric P. Xing](#) and [Prof. Yoon Kim](#)

Pittsburgh, PA

Fall 2020 -

University of North Carolina at Chapel Hill

B.S. IN COMPUTER SCIENCE AND STATISTICS

• Advisor: [Prof. Mohit Bansal \(UNC-NLP Lab\)](#)

Chapel Hill, NC

2016 - 2020

Publications

RLPrompt: Optimizing Discrete Text Prompts With Reinforcement Learning [\[pdf\]](#)

Mingkai Deng*, Jianyu Wang*, Cheng-Ping Hsieh*, Yihan Wang, **Han Guo**, Tianmin Shu, Meng Song, Eric P. Xing, Zhiting Hu.
Preprint on arXiv.

Text Generation with Efficient (Soft) Q-Learning [\[pdf\]](#)

Han Guo, Bowen Tan, Zhengzhong Liu, Eric P. Xing, Zhiting Hu.
Preprint on arXiv.

VisualGPT: Data-efficient Image Captioning by Balancing Visual Input and Linguistic Knowledge from Pretraining [\[pdf\]](#)

Jun Chen, **Han Guo**, Kai Yi, Boyang Li, Mohamed Elhoseiny.
Proceedings of CVPR 2022.

Uncertainty Toolbox: an Open-Source Library for Assessing, Visualizing, and Improving Uncertainty Quantification [\[pdf\]](#)

Youngseog Chung, Ian Char, **Han Guo**, Jeff Schneider, Willie Neiswanger.
Uncertainty and Robustness in Deep Learning Workshop, ICML 2021.

FastIF: Scalable Influence Functions for Efficient Model Interpretation and Debugging [\[pdf\]](#)

Han Guo, Nazneen Fatema Rajani, Peter Hase, Mohit Bansal, Caiming Xiong.
Proceedings of EMNLP 2021.

An Overview of Uncertainty Calibration for Text Classification and the Role of Distillation [\[pdf\]](#)

Han Guo, Ramakanth Pasunuru, and Mohit Bansal.
RepL4NLP Workshop, ACL 2021.

DORB: Dynamically Optimizing Multiple Rewards with Bandits [\[pdf\]](#)

Ramakanth Pasunuru, **Han Guo**, and Mohit Bansal.
Proceedings of EMNLP 2020.

Multi-Source Domain Adaptation for Text Classification via DistanceNet-Bandits [\[pdf\]](#)

Han Guo, Ramakanth Pasunuru, and Mohit Bansal.
Proceedings of AAAI 2020, New York, NY.

AutoSeM: Automatic Task Selection and Mixing in Multi-Task Learning [\[slides\]](#) [\[pdf\]](#)

Han Guo, Ramakanth Pasunuru, and Mohit Bansal.
Proceedings of NAACL 2019, Minneapolis, MN.

Dynamic Multi-Level Multi-Task Learning for Sentence Simplification [\[pdf\]](#)

Han Guo, Ramakanth Pasunuru, and Mohit Bansal.
Proceedings of COLING 2018, Santa Fe, New Mexico. ([“Area Chair Favorites” Paper Award](#))

Soft, Layer-Specific Multi-Task Summarization with Entailment and Question Generation [\[pdf\]](#)

Han Guo*, Ramakanth Pasunuru*, and Mohit Bansal.
Proceedings of ACL 2018, Melbourne, Australia.

Interactive-Length Multi-Task Video Captioning with Cooperative Feedback [\[link\]](#)

Han Guo, Ramakanth Pasunuru, and Mohit Bansal.
Proceedings of NeurIPS 2017, Long Beach, CA (demo papers).

Towards Improving Abstractive Summarization via Entailment Generation [\[pdf\]](#)

Ramakanth Pasunuru, **Han Guo**, and Mohit Bansal.
Proceedings of Workshop on Summarization Frontiers, EMNLP 2017, Copenhagen, Denmark.

Experience

Graduate Research Assistant

CMU LANGUAGE TECHNOLOGIES INSTITUTE

- Advisors: [Eric P. Xing](#) and [Prof. Yoon Kim](#)

Pittsburgh, PA

2020.8 - PRESENT

Research Intern

MIT-IBM WATSON AI LAB

- Advisor: [Prof. Yoon Kim](#)

Cambridge, MA

2021.6 - 2021.8

Research Intern

SALESFORCE RESEARCH

- Advisors: [Caiming Xiong](#), [Nazneen Fatema Rajani](#)

Palo Alto, CA

2020.6 - 2020.8

Research Intern

BAIDU RESEARCH

- Advisor: [Boyang Li](#)

Sunnyvale, CA

2019.5 - 2019.8

Research Assistant

UNC DEPARTMENT OF COMPUTER SCIENCE

- Advisor: [Mohit Bansal](#)

Chapel Hill, NC

2017.4 - 2020.6

Research Assistant

UNC DEPARTMENT OF MATHEMATICS

- Advisor: [Feng Shi](#)

Chapel Hill, NC

2017.2 - 2017.6

Undergraduate Learning Assistant

UNC DEPARTMENT OF COMPUTER SCIENCE

- COMP116 "Introduction to Scientific Computing" course (MATLAB).

Chapel Hill, NC

2017.2 - 2017.5

Awards/Honors

2019.12 **Finalist, 2020 CRA Outstanding Undergraduate Researchers**

2019.9 **Phi Beta Kappa**

2019.8 **WeCNLP Travel Grant**

Travel award for attending the second annual West Coast NLP (WeCNLP) Summit.

2019.1 **Honorable Mention, 2019 Computing Research Association Outstanding Undergraduate Researchers**

This award program recognizes undergraduate students in North American colleges and universities who show outstanding research potential in an area of computing research.

2018.6 **Area Chair Favorites Paper Award, COLING 2018**

Papers that were nominated by reviewers and recognised as excellent by chairs.

2018.5 **ACL Travel Award**

Travel award from a National Science Foundation Grant, and the ACL Walker Fund, for presenting at ACL 2018.

2017.11 **OUR Travel Award**

Travel award from the Office of Undergraduate Research for presenting at NeurIPS 2017.

Other Experience

Live Demonstrations and Outreach

2017 - 2019

- Developed interactive demonstrations for our research projects, including video-to-text captioning system and sentence simplification system.
- Presented the demos at NeurIPS-2017 conference, UNC Science Expo, and UNC Middle/High School Demo Day.

Data Analytics

2015 - 2016

- Worked in 10-member group, and collected over 1,800 data on performance indicators of high school student organizations in Shanghai, China.
- Performed basic data analytics, and visualized the results using Tableau and R.
- Presented the final work online and in high schools / events, and received 3,000+ page views (online) and 300 audience (offline).

Leadership Experience

2014 - 2016

- Chaired the student organization Tuck In from 2014.7 to 2015.12.
- Tuck In initiated 9 events, achieved in total 1700 attendees, brought art education to around 200 kids, and made donation (5,000 RMB) to local education institution and NGO in Kenya. Tuck In was reported by Liberation Daily, Shanghai News, Shanghai Student Post, Eastday, etc.
- Volunteered in Kenya, taught science to kids, built their school and houses, and carried water for local residents.

Public Speaker

2015 - 2016

- Invited speaker as Tuck In chair at 6 middle schools, university, TEDx Weiyu, Citic Bank, Hugh O'Brian Youth Leadership China seminar, etc.
- Invited guest at Shanghai Media Group.