Meng Cao

☎ +1-438-722-6288   ✉ meng.cao@mail.mcgill.ca   ⧉ mcao516   🔗 mcao516.github.io

EDUCATION

McGill University / Mila - Québec AI Institute   Jan. 2021 – Present

Ph.D. in Computer Science   GPA: 4.0/4.0

Advisor: Jackie Chi Kit Cheung

McGill University / Mila - Québec AI Institute   Sept. 2019 – Jan. 2021

M.Sc. in Computer Science   GPA: 4.0/4.0

Advisor: Jackie Chi Kit Cheung

Northeastern University (China)   Sept. 2015 – June 2019

Major in Software Engineering   GPA: 3.96/4.0

Ranking: 1/59

RESEARCH INTERESTS

Natural Language Processing, Text Summarization, Language Generation, Deep Learning

PUBLICATIONS

[1] **Meng Cao**, Yue Dong and Jackie C. K. Cheung. *Hallucinated but Factual! Inspecting the Factuality of Hallucinations in Abstractive Summarization*. ACL (2022)

[2] **Meng Cao**, Yue Dong, Jiapeng Wu and Jackie C. K. Cheung. *Factual Error Correction for Abstractive Summarization Models*. EMNLP (2020).

[3] Jiapeng Wu, **Meng Cao**, Jackie Chi Kit Cheung, William L. Hamilton. *TeMP: Temporal Message Passing for Temporal Knowledge Graph Completion*. EMNLP (2020).

[4] **Meng Cao** and Jackie Chi Kit Cheung. *Referring Expression Generation Using Entity Profiles*. EMNLP-IJCNLP (2019).

[5] **Meng Cao**, Chaohe Zhang, Dancheng Li, Qingping Zheng and Ling Luo. *Transfer Learning for Cross-Domain Sequence Tagging Tasks*. Future of Information and Communications Conference (FICC) 2018, San Francisco, March 14-15, 2019.

INDUSTRY EXPERIENCES

Microsoft Research Lab – Montréal   Apr. 2022 – Present

Machine Learning Research Intern   Advisor: Samira Shabanian & Mehdi Fatemi

- Mitigate bias in text generation systems using reinforcement learning approach.

Borealis AI – **Canada, Toronto**   May 2020 – August 2020

Research Intern, Alan Team   Advisor: Yanshuai Cao

- Build a distributed data-parallel Text-to-SQL system.
- Applied meta-learning algorithms (MAML, Reptile, MetaReg) in cross-database semantic parsing task.
- Achieved promising results in the zero-shot domain transfer setting.

IBM Research – **China, Beijing**   September 2018 – June 2019

Research Assistant Intern, Information Analytics Team   Advisor: Shiwan Zhao

- Chinese word segmentation: responsible for training Chinese word segmentation model. Proposed a novel segmentation

model based on n-gram and information entropy to segment the input sentences.

- Neural Architecture Search: PyTorch implementation of Google's ENAS neural architecture algorithm.
- Migrated a neural network model which is implemented in Keras into Java environment using Deeplearning4j.

PRESENTATIONS AND TALKS

Factual Error Correction for Abstractive Summarization Models (Poster)	Nov., 2020
EMNLP 2020	Online
Referring Expression Generation Using Entity Profiles (Poster)	Nov., 2019
EMNLP 2019	Hong Kong, China
Transfer Learning for Cross-Domain Sequence Tagging Tasks (Oral)	March, 2019
FICC 2018	San Francisco, USA

SCHOLARSHIPS

China National Scholarship (¥ 16,000)	2015-2016, 2017-2018
The Chinese Government, among top-0.2% all undergraduates in China	
The Bao Gang Education Scholarship (¥ 10,000)	September 2018
China BAOWU Steel Group, selected rate: 4/20000 in NEU	
The First-Class Scholarship in Northeastern University (¥ 9,000)	2015-2016, 2016-2017, 2017-2018
Northeastern University, among top-3% undergraduates in NEU	

AWARDS

"Top Ten Undergraduates" in Northeastern University	May 2018
Northeastern University, among top-0.2% undergraduates in NEU	
The Excellent Performance Award for IBM Undergraduate Innovation Lab Program	April 2017
IBM Research China, Beijing	
The First Prize in the 8th National College Students Mathematics Competition	October 2016
Chinese Mathematical Society	
The First Prize in the 9th National College Students Mathematics Competition	October 2017
Chinese Mathematical Society	
The Meritorious Winner for the Mathematical Contest in Modeling (MCM/ICM), 2018	February 2018
COMAP, the Consortium for Mathematics and Its Applications (USA)	
The Honorable Mention for the Mathematical Contest in Modeling (MCM/ICM), 2017	February 2017
COMAP, the Consortium for Mathematics and Its Applications (USA)	

RESEARCH FUNDING

Mitacs Globalink Research Internship ($19,500)	June 2018 – September 2018
Mitacs Globalink summer research internship program ($4,500) & Mitacs graduate student funding ($15,000)	

SKILLS

Programming Languages: skilled in: Java, Python (especially NumPy, PyTorch); familiar with: Tensorflow, JavaScript, SQL

Extensive knowledge of: Natural Language Processing, Abstractive Text Summarization, Machine Learning (generative models), Deep Learning