Meng Cao

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EDUCATION

McGill University / Quebec Artificial Intelligence Institute (Mila) September 2019 – Present

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

Supervisor: Professor Jackie Chi Kit Cheung

Northeastern University (China), School of Computer Science September 2015 – June 2019

Major in Software Engineering GPA: 3.96/4.0

Supervisor: Professor Dancheng Li

RESEARCH INTERESTS

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

PUBLICATIONS

[1] **Meng Cao**, Yue Dong and Jackie C. K. Cheung. *Inspecting the Factuality of Hallucinated Entities in Abstractive Summarization*. https://arxiv.org/abs/2109.09784.

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

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

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

[4] **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

HUAWEI – **Canada, Montreal** May 2021 – Dec 2021

Research Intern, NLP Team Advisor: Mehdi Rezagholizadeh

- Improve knowledge distillation on text generation model

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)

TEACHING EXPERIENCES

COMP 303 – Software Design (McGill University) — Winter 2020, 2021
Teaching assistant

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