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: 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: Dancheng Li
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. *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