

HAORAN ZHANG

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EDUCATION

University of Illinois Urbana-Champaign *Aug 2019 - Present*
Master of Science, Information Management

Changsha University of Science & Technology *Jul 2014 - Jun 2018*
Bachelor of Science, Computer Science

RESEARCH EXPERIENCE

University of Illinois Urbana-Champaign *Sep 2019 - Present*
BLENDER Member, Supervised by Heng Ji.

Changsha University of Science & Technology *May 2018 - Sep 2019*
Research Assistant on Relation Extraction, Supervised by Daojian Zeng.

University of California, Los Angeles *Sep 2016 - Jun 2017*
Remote Summer Research on Computer Vision, Supervised by Yajia Yang.

PROJECTS

Sequence-to-Unordered-Multi-Tree for Joint Extraction of Relations and Entities *2020*
(On going)

- Formulated the output sequence to unordered-multi-tree structure to mitigate the notorious exposure bias problem in the well-studied Seq2Seq model.
- Yielded 32 and 0 (F1) absolute improvement over baseline on DuIE and NYT dataset respectively.
- Detected flaws of the widely-used NYT dataset, i.e. the models only memorize the appeared triplets rather than generalize to new entities.
- Implementing a toolkit containing [4 Models × 4 Datasets] to be open-sourced.

Sequence-to-Sequence for Joint Extraction of Relations and Entities¹ *2019*

- Figured out a linear algebra bug causing underfitting of training set in an ACL2018 paper.
- Based on theoretical analysis, added only one more non-linear layer to fix the bug.
- Yielded 14 and 31 (F1) absolute improvement over baseline on NYT and WebNLG dataset respectively.

Controlled Sequence-to-Sequence for Paraphrase Generation² *2018*

- Using only pairwise sentence training set, generated multiple paraphrases according to different keywords.
- The system was successfully deployed to both individual users scenario and data augmentation of models.

PAPERS AND MANUSCRIPTS

1. D. Zeng*, **H. Zhang***, Q. Liu, *CopyMTL: Copy Mechanism for Joint Extraction of Entities and Relations with Multi-Task Learning*. AAAI, 2020. Retrieved from [here](#).
2. D. Zeng, **H. Zhang**, L. Xiang, J. Wang and G. Ji, *User-Oriented Paraphrase Generation With Keywords Controlled Network*, in IEEE Access, vol. 7, pp. 80542-80551, 2019. doi: 10.1109/ACCESS.2019.2923057. Retrieved from [here](#).