Exploiting Semantic Relations for Fine-grained Entity Typing

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Fine-grained Entity Typing (FET)

- Recognize the fine-grained types of a mention in a sentence that matches the context.
- The span of the mention is given.



The Typical Neural Approach to FET

- Get a representation for the mention string (e.g., average of word vectors).
- Get another representation for the context (e.g., use LSTM).
- Concatenate them and feed to a classification layer.

Sonse Shimaoka, Pontus Stenetorp, Kentaro Inui, and Sebastian Riedel. Neural architectures for fine-grained entity type classification. In Proceedings of EACL. 2017. Yasumasa Onoe and Greg Durrett. Learning to denoise distantly-labeled data for entity typing. In Proceedings of NAACL. 2019. Hongliang Dai, Donghong Du, Xin Li, and Yangqiu Song. Improving fine-grained entity typing with entity linking. In Proceedings of EMNLP-IJCNLP. 2019.

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System Predict: /ORGANIZATION

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Semantic Role Labeling annotates "Salty Dogs" as a patient of the verb "drink".

Our Approach

Connaught is a biotechnology research and vaccine manufacturing concern.

Hypernym Relations can be helpful.

Characters drink Salty Dogs, whistle "Johnny B. Goode" and watch Bugs Bunny reruns.

Verb-argument Relations can be helpful.

• Thus, we exploit these two types of relations related to the mention to improve FET.











Thanks!

- Read our paper for more details if you are interested.
- Code will be available at:

https://github.com/HKUST-KnowComp/SRFET