

ZHAOMIN XIAO

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EDUCATION

University of North Texas

Sep 2019 - Present

Ph.D. in Computer Science and Engineering

University of Pittsburgh

May 2019

M.S. in Information Science

Shenzhen University

July 2017

B.S. in Mathematics & Applied Mathematics

RESEARCH INTEREST

Natural Language Processing, Deep Learning, Spatio-temporal Knowledge Mining

RESEARCH EXPERIENCE

Extracting Spatial-temporal Knowledge from Twitter Timeline

Feb 2021 - Sep 2021

- Propose the task of determining whether the author of the tweet was located in the mentioned location, based on the Twitter timeline.
- Construct a context-aware neural network to solve the task. Experimental results show that the incorporating Twitter timeline can boost model's performance.

Spatial-temporal Knowledge Mining

Aug 2019 - Feb 2021

- Propose a new task of determining whether the author of the tweet was located in the mentioned location when the tweet was posted.
- Build a new corpus consisting of 6,540 tweets. The annotation quality is guaranteed by ensuring the Krippendorff's alpha is over 0.60.
- Construct several neural models to build baselines for this task. The experimental results show that the multi-modal model yields the best result.
- Error analyses show that the usage of advanced tools for location identification and advertisement filtering in data preprocessing might strengthen neural models.

Temporal Ordering of Locations

Oct 2019 - Apr 2021

- Determine whether the author of the travelogue is located in the mentioned location or not.
- Order the visited location in each document of the travelogue.
- Error analyses show that incorporating contextual information would be useful for this task.

Native Language Identification

Aug 2018 - Dec 2018

- Determine the native language of the author of TOEFL essays.
- Use nltk to extract lots of linguistic features, such as part-of-speech tags, stop words, and punctuation marks.
- Tune the parameters using GridSearch with 5-fold cross-validation.

TECHNICAL SKILLS

**Computer Languages
Tools**

Python, Java, C, HTML, CSS, JavaScript
PyTorch, TensorFlow, nltk, spaCy, scikit-learn