Zhihan Zhou

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EDUCATION

Department of Computer Science, Northwestern University   09/2018 - Present

✧ Master of Science, Computer Science

  Advisor: Han Liu   GPA: **4.0/4.0**

School of Mathematical Sciences, Zhejiang University   09/2014 - 06/2018

✧ Bachelor of Science, Mathematics and Applied Mathematics

PUBLICATIONS

✧ **Joint Speaker Diarization and Recognition Using Convolutional and Recurrent Neural Networks**

  Zhihan Zhou, Yichi Zhang, Zhiyao Duan

  Proceedings of ICASSP 2018, Calgary, Canada

✧ **ELLPMDA: Ensemble learning and link prediction for miRNA-disease association prediction**

  Xing Chen*, Zhihan Zhou*, Yan Zhao (*: joint first author)

  Published on RNA Biology, pages 807-818, volume 15, 2018

✧ **Few-Shot Sequence Labeling with Label Dependency Transfer and Pair-wise Embedding**

  Yutai Hou, Zhihan Zhou, Yijia Liu, Ning Wang, Wanxiang Che, Han Liu, Ting Liu

  Preprint 2019

SELECTED EXPERIENCE

Research Assistant @MAGICS Lab, Northwestern University   01/2019 - Present

✧ Conducted several NLP projects including but not limited to:

  Few-shot Sequence Labeling: Perform sequence labeling in domain with few labeled data by combining token classification results and the label dependencies which were learned from other domains.

  Adversarial Training for Dialogue: Built a chitchat system under a Generative Adversarial Net (GAN) framework by taking seq2seq chatbot as generator and retrieval-based chatbot as discriminator.

  User-simulator for Dialogue Management: Construct a planning-based user simulator to train a better reinforcement learning-based dialogue management agent for task-oriented chatbot system.

✧ Deployed a distributed computing environment on a private computer cluster consists of 8 nodes. We deploy 8 identical container on each of cluster node with Kubernetes Daemon Set and utilize Horovod package to support distributed computation over these containers. The host IP address are mapped to its corresponding containers to ensure each container could communicate with InfiniBand.

Visiting Student @AIR Lab, University of Rochester   07/2017 - 10/2017

✧ Designed a system to simultaneously implement speaker diarization and recognition to identify specific speakers and estimated corresponding time boundaries. Employed an LSTM to integrate the specker classification results and the probabilities of speaker change at each time step predicted by a CNN.

COMPUTER SKILLS

✧ Computer languages: Python, Matlab, C, R

✧ Skills: Kubernetes, Docker, Linux