Songhe Wang

Personal Information

Address: 207 Conner Drive, Chapel Hill 27514, United States
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Education

05/2017 – present
Chapel Hill, United States

Computer Science & Math
University of North Carolina at Chapel Hill
Major GPA: 3.86/4.0
Relevant Coursework: Computational Theory,Machine Learning, Computer Organization and Design, Data Structure, 2D Graphics, Combinatorics, Non-Euclidean Space, Real Analysis, Advanced Differential Equations

Publications

11/2020

Frustratingly Difficult Domain Adaptation for Text-to-SQL Semantic Parsing
Naihao Deng*, Songhe Wang*, Peng Shi, Wanyong Feng, Tao Yu, Dragomir Radev, Rui Zhang
NAACL 2021

09/2019

Revealing the Importance of Semantic Retrieval for Machine Reading at Scale
Yixin Nie, Songhe Wang, Mohit Bansal
https://arxiv.org/abs/1909.08041
EMNLP 2019

09/2020

Spatial-temporal Analysis of COVID-19's Impact on Human Mobility: the Case of the United States
Songhe Wang*, Kangda Wei*, Lei Lin, Weizi Li
https://arxiv.org/abs/2010.03707
CICTP 2020

02/2021

An Automatic Pipeline for Educational Resource Discovery using Transfer Learning
Irene Li, Wai Pan Wong, Songhe Wang, Dragomir Radev
ACL 2021

Research Experience

05/2020 – present
New Haven, United States

Research Assistant
Yale LILY Lab
Worked with Prof. Dragomir Radev on Text2Sql and AAN project. Specifically, we studied domain adaptation for semantic parsing, Wikipedia generation, and academic resources collection.

01/2020 – 05/2020
Memphis, United States

Research Assistant
University of Memphis
Worked with Prof. Weizi Li on Intelligent Transportation System. Specifically, we studied the impact of COVID-19 on human mobility patterns at the state level within the

Research Experience

United States and published our results in CICTP 2020.

08/2018 – 01/2020
Chapel Hill, United States

Research Assistant
UNC Computer Science Department
Worked with Prof. Mohit Bansal on NLP and Reinforcement Learning tasks. We designed a pipeline for large-scale machine comprehension tasks and presented in our EMNLP 2019. We also attempted to improve the image captioning model by applying Actor-Critic algorithms.

Achievements

- Carolina Data Challenge 2nd place
- Putnam Competition top 10% nationwide
- Virginia Tech Math Competition top 5% nationwide

Skills

- **Proficiency** in Python, TensorFlow, PyTorch, Shell, R, Docker, Kubernetes, SLURM, Singularity, Git.
- **Familiarity** in MATLAB, HTML, CSS, JavaScript, Java, SQL, C, Tex, MongoDB, ZeroMQ, Tableau.

Other Projects

Image Captioning
- Implemented the image captioning model "Show, Attend and Tell"and matched the results of the original work

Question Generation
- Built question generation model trained on Visual Question Answering dataset with self-critical sequence training method

Meme Generation
- Mined data from webs and creatively built meme generation model as the final project for COMP 562: Machine Learning

Other Experience

Professional service
- Reviewer, Conference on Empirical Methods in Natural Language Processing (EMNLP) 2020
- Reviewer, Proceedings of the First Workshop on Interactive and Executable Semantic Parsing
- Evaluator, SPIDER Challenge 2020
- Evaluator, COSQL Challenge 2020
- Evaluator, SPARC Challenge 2020

Data analytics
- Worked closely with autism research group in UNC Medicine school verified over 2000 data
- Performed basic data analytics, and visualized the results using R