JIAN WANG

B3-534, South China University of Technology, Panyu District, Guangzhou, China
Email: cs_wangjian@mail.scut.edu.cn ⋄ Tel: (+86) 188 2507 7958
Homepage: https://iwangjian.github.io

EDUCATION

South China University of Technology (SCUT) Sep. 2017 - Jun. 2020
M.Eng. Computer Science & Technology **GPA: 87.83/100**
Natural Language Processing (NLP), Machine Learning
South China University of Technology Sep. 2013 - Jun. 2017
B.Eng. Network Engineering (Major) **GPA: 3.74/4.0**
B.Ec. Finance (Minor)

EXPERIENCE

Rulai Inc. **Chengdu, China**
Research intern, working on text-to-SQL Jul. 2020 - Oct. 2020
Mentor: Prof. Yi Zhang
SIAT, Chinese Academy of Sciences **Shenzhen, China**
Research intern, working on dialogue system Aug. 2018 - Sep. 2019
Mentor: Prof. Min Yang

PUBLICATIONS

Jian Wang, Junhao Liu, Wei Bi, Xiaojiang Liu, Kejing He, Ruifeng Xu, and Min Yang. Dual Dynamic Memory Network for End-to-End Multi-turn Task-oriented Dialog Systems. In *Proceedings of the 28th International Conference on Computational Linguistics* (COLING-2020).

Jian Wang, Junhao Liu, Wei Bi, Xiaojiang Liu, Kejing He, Ruifeng Xu, and Min Yang. Improving Knowledge-aware Dialogue Generation via Knowledge Base Question Answering. In *Proceedings of the 34th AAAI Conference on Artificial Intelligence* (AAAI-2020).

Jian Wang, Kejing He, and Min Yang. Topic Discovery by Spectral Decomposition and Clustering with Coordinated Global and Local Contexts. *International Journal of Machine Learning and Cybernetics* (JMLC, JCR Q1).

RESEARCH PROJECTS

End-to-end Task-oriented Dialog Systems Apr. 2019 - Oct. 2019
Research project at SIAT, Chinese Academy of Sciences

- Proposed a Dual Dynamic Memory Network (DDMN) for task-oriented dialog systems, which dynamically keeps track of long dialog context for multi-turn interactions and effectively incorporates KB knowledge into generation.
- Employed separate memories to model dialog context and KB triples. The iterative interactions between the two kinds of memories make the decoder focus on relevant dialog context and KB facts for generating coherent and human-like dialogs.
- The experimental results on three public datasets showed that DDMN achieves impressive results compared to the existing methods. More importantly, our model is able to maintain more sustained conversations than the compared methods with the increase of dialog turns.

Dialogue Generation with Knowledge Transferring Aug. 2018 - Apr. 2019
Research project at SIAT, Chinese Academy of Sciences

· Proposed a novel knowledge-aware dialogue generation model TransDG, which transfers the abilities of question understanding and fact extraction from the pre-trained knowledge base question answering (KBQA) model to facilitate both post understanding and factual knowledge selection from KB.
· Proposed a multi-step decoding strategy which captures the knowledge connection between the post and response. Both the post and draft response generated by the first-step decoder is matched with relevant facts from KB, which makes the final response generated by the second-step decoder more appropriate and reasonable with respect to the post.
· Proposed a response guiding attention mechanism which steers the model to focus on relevant features with the help of k-best response candidates.

Abstractive Text Summarization Aug. 2018 - Dec. 2018
Group project of 2018 Byte Cup International Machine Learning Competition

· To solute the task of automatically generating titles after giving a set of articles with various topics, we proposed to employ a CNN network to select salient sentences, then employ a sequence-to-sequence model with copy mechanism to rewrite the extracted sentences, finally build an advantage actor-critic (A2C) model with policy gradient to improve the performance.
· Achieved Rouge-L score of 35.38 on online validation and 38.98 on online test, awarded as the 3rd prize in the finals among over 1000 teams.

Topic Modeling Sep. 2017 - Jul. 2018
Research project at Big Data and High Performance Computing Lab, SCUT

· Proposed a novel Coordinated Embedding Topic Model (CETM) for topic modeling, which incorporates spectral decomposition and clustering by leveraging both global and local context information to discover topics.
· Extensive experiments on three real-world datasets demonstrated CETM can discover more coherent topics and classify documents more accurately, which requires much less hyper-parameters compared to other baseline topic models (e.g., Gaussian-LDA, LFTM, CLM).

HONORS/AWARDS

AAAI 2020 Student Scholarship	2020
First Class of Academic Scholarship of South China University of Technology	2018, 2017
National Scholarship (**Top 1%**, the highest national wide scholarship for undergraduates)	2016
National Encouragement Scholarship (**Top 10%**)	2015, 2014
Third Prize of 2018 Byte Cup International Machine Learning Competition	2018
Ranked 50*th* Worldwide at IEEEXtreme 11.0 Programming Competition	2017
Shenzhen Area Site Bronze Medal of HUAWEI Code Craft 2016	2016
Third Prize of the First Next-Generation Internet Technology Innovation Competition	2015
Merit Student of SCUT Award & Outstanding Student Leader Award	2015, 2014

TEACHING EXPERIENCE

Teaching assistant for *Algorithm Design and Analysis*, SCUT	Spring 2018
Teaching assistant for *Advanced Language Program Design (C++)*, SCUT	Fall 2017

TECHNICAL SKILLS

Programming Languages	C/C++, Python, Java, Shell, JavaScript
Tools	Tensorflow, PyTorch, Git, Docker, MATLAB
Editing	LaTex, Markdown, Vim