

ZIWEI JI

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EDUCATION

The Hong Kong University of Science and Technology

Hong Kong, China

Ph.D. Candidate in ECE Department (NLP, NLG, Dialogue System, Hallucination, Faithfulness)

Sept. 2019 - Present

Huazhong University of Science and Technology

Wuhan, China

B.Sc. in Electronic Science and Technology (GPA: 3.97/4.0, Rank: 1/156)

Sept. 2015 - Jun. 2019

PROJECT

AI Film

Feb. 2020 - Feb. 2022

Center for Artificial Intelligence Research (CAiRE) & Central Academy of Fine Arts (CAFA)

- Introduction: We present an automatic, real-time film-producing system. 1) Design a genre-controllable and plot-guided film script generation system. 2) Collect a video database from social media and retrieve video clips based on the scripts. 3) Develop a user interface for demonstration.
- Output: Exhibited in Pingyao International Film Festival, and Xu Bing's Language Art Exhibition. Published a paper in AACL Demo.
- My work: Implement the code for the script generation model, video retrieval model, most baselines, and website. Collect and pre-process the video database. Communicate and collaborate between two institutions.

RHO(ρ): Reducing Hallucination in Open-domain Dialogues

May. 2022 - Jan. 2023

- Introduction: To handle the heterogeneity between external knowledge and dialogue context and generate more faithful responses, we propose RHO with 1) Local Knowledge Grounding combining textual embeddings with the corresponding knowledge graph (KG) embeddings. 2) Global Knowledge Grounding via the attention mechanism for multi-hop reasoning abilities. 3) A response re-ranking technique based on walks over KG sub-graphs for better conversational reasoning.
- Output: The paper is on arxiv and under review.
- My work: Implement the code for the KG-grounded dialogue generation model and baselines.

SELECTED PUBLICATIONS

RHO(ρ): Reducing Hallucination in Open-domain Dialogues with Knowledge Grounding

under review

Ziwei Ji, Zihan Liu, Nayeon Lee, Tiezheng Yu, Pascale Fung, et al.

Survey of Hallucination in Natural Language Generation

ACM Computing Surveys 2022

Ziwei Ji, Nayeon Lee, Rita Frieske, Pascale Fung, et al.

VScript: Controllable Script Generation with Visual Presentation

AACL Demo 2022

Ziwei Ji, Yan Xu, I-Tsun Cheng, Pascale Fung, et al.

Plausible May Not Be Faithful: Probing Object Hallucination in Vision-Language Pre-training

under review

Wenliang Dai, Zihan Liu, Ziwei Ji, Dan Su, Pascale Fung

CrossNER: Evaluating Cross-Domain Named Entity Recognition

AAAI 2021

Zihan Liu, Yan Xu, Tiezheng Yu, Wenliang Dai, Ziwei Ji, Samuel Cahyawijaya, Pascale Fung, et al.

Multi-hop Question Generation with Graph Convolutional Network

EMNLP 2020 Findings

Dan Su, Yan Xu, Wenliang Dai, Ziwei Ji, Tiezheng Yu, Pascale Fung

Model Generalization on COVID-19 Fake News Detection

ACL CONSTRAINT 2021

Yejin Bang¹, Etsuko Ishii¹, Samuel Cahyawijaya¹, Ziwei Ji¹, Pascale Fung

WORK EXPERIENCE

¹Equal Contribution

Research Intern

Sept. 2017 - Feb. 2018

Wuhan National Laboratory for Optoelectronics

Wuhan, China

- Introduction: Numerical simulation of electrokinetic phenomena in nanofluidics.
- Output: Publish two papers about the impact of membrane surface charges and ionization equilibrium of weak electrolytes.
- Supervisors: Xiangshui Miao and Yuhui He.

SELECTED AWARDS

National Scholarship (3 times, 1%)	2016, 2017, 2018
Merit Student at Huazhong University of Science and Technology (3 times, 3%)	2016, 2017, 2018
Second Prize of Hubei Province in National Undergraduate Mathematics Competition	2017
Outstanding Undergraduates in Term of Academic Performance (1%)	2016

SKILLS AND OTHERS

Skills	Python, Pytorch, C, JavaScript, HTML, MATLAB, Photoshop, Premiere Pro
Languages	Chinese (Mother Tongue), English (Full-Proficiency)