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, Honored)   Sept. 2015 - Jun. 2019

PROJECT

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.

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.

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   EACL 2023
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 Bang[1], Etsuko Ishii[1], Samuel Cahyawijaya[1], Ziwei Ji[1], Pascale Fung

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[1]Equal Contribution

OTHER EXPERIENCE

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.

Assistant   Jan. 2016 - Sept. 2016
Electrical and Electronic Technology Innovation Center   Wuhan, China

- Introduction: During the National Student Electronic Design Competition, manage and acquire electronic components, prevent emergency incidents, and maintain and replace equipment. In normal times, record and summarize courses and meetings, update and promote news.

SELECTED AWARDS

China 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, LabVIEW, COMSOL, Altium Designer
Languages	Chinese (Mother Tongue), English (Full-Proficiency, IELTS 7)