

Zhanming (Allan) Jie

allan@bytedance.com | allanj.github.io | Github: [allanj](https://github.com/allanj) | Last update: May 30, 2023

RESEARCH INTEREST

Numerical reasoning in Large Language Model, Structured Prediction in NLP, Multi-modal Question Answering

EDUCATION

- Singapore University of Technology and Design** 2016 - 2020
PhD of Computer Science
- Supervisor: Prof. Wei Lu
 - Thesis: “*Leveraging Dependency Trees for Structured Prediction*” (Best Thesis Award)
- The Hong Kong University of Science and Technology** 2014 - 2015
Doctoral Program
- Supervisor: Prof. James She
- University of Electronic Science and Technology of China** 2010 - 2014
Bachelor of Engineering
- GPA - 3.91/4, Department Ranking: 6/193

PROFESSIONAL EXPERIENCE

- Senior NLP Scientist, ByteDance AI Lab** May 2022 – Present
Singapore
- Mentors: Hang Li
 - Research Area: multi-modal QA and math word problem solving. Fine-tune LLM for numerical reasoning.
- NLP Scientist, ByteDance AI Lab** May 2020 – May 2022
Singapore
- Mentors: Hang Li and Wei Lu
 - Research Area: natural language understanding and multi-modal QA
- NLP Research Intern, DAMO Academy, Alibaba** November 2019 – May 2020
Singapore
- Mentor: Lidong Bing
 - Research Area: Low-resource named entity recognition
- NLP Research Intern, Allen Institute for Artificial Intelligence** June 2019 – Sept 2019
Washington
- Supervisor: Pradeep Daisg & Ana Marasovic
 - Research Area: Question Answering with Coreferential Knowledge
- Research Intern, Singapore University of Technology and Design** Feb 2014 – May 2014
Singapore
- Mentor: Prof. Wei Lu
 - Research Area: Multilingual Semantic Parsing
- Research Assistant, Shanghai Jiao Tong University** Dec 2013 – Feb 2014
China
- Mentor: Prof. Yaohui Jin
 - Research Area: Cyber Attack in Cloud Computing

PROFESSIONAL SERVICE

- Structured Prediction Framework** https://github.com/allanj/pytorch_neural_crf
Active Maintainer
- SPC, PC/Reviewer for Conference and Journal**
- Senior Program Committee: AAAI-2023
 - ACL ARR Rolling Review, ACL 2023, ACL/EMNLP/CoNLL 2022, ACL 2021, EMNLP 2021, ACL 2020, EMNLP 2020, NLPCC 2020, AAAI 2019, EMNLP 2019, NAACL 2019, EMNLP 2018, IJCNLP 2017, NLPCC 2017
 - Transactions on Asian and Low-Resource Language Information Processing, Natural Language Engineering, Computational Linguistic

AWARDS

Breakthrough in New Area, ByteDance	Nov 2020
Best PhD Thesis Award, SUTD	Apr 2020
Student Scholarship Award, AAAI-2017	Feb 2017
SUTD President's Graduate Fellowship, SUTD	2016 – 2020
Postgraduate Studentship, HKUST	2014 – 2015
Outstanding Volunteer, Zhongshan, Guangdong, China	Aug 2014
Excellent Graduation Thesis and Excellent Graduate Student, UESTC	Jul 2014
The Innovation Fund's Project of Oscilloscope High-speed Data Acquisition Channel, UESTC.	Mar 2013
The Third Prize in "UESTC CUP" Mobile Application Design Contest	Mar 2013
First-Class People's Scholarship (Top 6%) UESTC	2012 – 2013
The Second Prize in "Ecovacs" Intelligent Robot Design Contest, UESTC	Oct 2012
Samsung Enterprise Scholarship (Top 3%) UESTC	2011 – 2012
National Encouragement Scholarship (Top 3%) UESTC	2010 – 2011

PUBLICATIONS

1. **Zhanming Jie** and Wei Lu. "Leveraging Training Data in Few-Shot Prompting for Numerical Reasoning." *In Findings of ACL*. 2023.
2. Shuwei Feng, Tianyang Zhan, **Zhanming Jie**, Trung Quoc Luong, Xiaoran Jin. "Sequence-to-Sequence Pre-training with Unified Modality Masking for Visual Document Understanding." *In Arxiv*. 2023.
3. **Zhanming Jie**, Jierui Li, and Wei Lu. "Learning to Reason Deductively: Math Word Problem Solving as Complex Relation Extraction." *In Proceedings of ACL*. 2022.
4. Yuxiang Zhou, Lejian Liao, Yang Gao, **Zhanming Jie** and Wei Lu. "To be Closer: Learning to Link up Aspect with Opinions." *In Proceedings of EMNLP*. 2021.
5. Lu Xu, **Zhanming Jie**, Wei Lu and Lidong Bing. "Better Feature Integration for Named Entity Recognition." *In Proceedings of NAACL*. 2021.
6. Xuefeng Yang, Benhong Wu, **Zhanming Jie**, Yunfeng Liu. "Overview of the NLPCC 2020 Shared Task: AutoIE." *In Proceedings of NLPCC*. 2020.
7. Liying Cheng, Yan Zhang, Dekun Wu, **Zhanming Jie**, Lidong Bing, Wei Lu, Luo Si. "Knowledge Graph Empowered Entity Description Generation." *In Proceedings EMNLP*. 2020.
8. **Zhanming Jie**, and Wei Lu. "Dependency-Guided LSTM-CRF for Named Entity Recognition." *In Proceedings of EMNLP*. 2019.
9. **Zhanming Jie**, Pengjun Xie, Wei Lu, Ruixue Ding and Linlin Li. "Better Modeling of Incomplete Annotations for Named Entity Recognition." *In Proceedings of NAACL*. 2019.
10. **Zhanming Jie**, and Wei Lu. "Dependency-based Hybrid Tree for Semantic Parsing." *In Proceedings of EMNLP*. 2018.
11. Chu Guo, **Zhanming Jie**, Wei Lu and Dario Poletti. "Matrix Product Operators for Sequence to Sequence Learning." *In Physical Review E*. 2018.
12. **Zhanming Jie**, Aldrian Obaja Muis, and Wei Lu. "Efficient Dependency-Guided Named Entity Recognition." *In Proceedings of AAAI*. 2017.
13. Ming Cheung, James She and **Zhanming Jie**. "Connection Discovery using Big Data of User Shared Images in Social Media." *IEEE Transactions on Multimedia*, 17(9), 1417-1428. 2015.
14. **Zhanming Jie**, Ming Cheung and James She. "A Cloud-assisted Framework for Bag-of-Feature Tagging in Social Networks." *In Proceedings of IEEE NCCA*. 2015.
15. Alvin Junus, Ming Cheung, James She, **Zhanming Jie**. "Community-Aware Prediction of Virality Timing Using Big Data of Social Cascades" *In Proceedings of IEEE BigDataService*. 2015.
16. **Zhanming Jie**, and Wei Lu. "Multilingual Semantic Parsing: Parsing Multiple Languages into Semantic Representations." *In Proceedings of COLING*. 2014.

PATENT

- Shuwei Feng, Tianyang Zhan, **Zhanming Jie**, Trung Luong. "A General Framework for Document Understanding". 2023
- Jiankun Lu, **Zhanming Jie**, Haoran Huang. "Automatic Question Generation based on Keywords and Knowledge".CN 113901784 A. 2021

Trung Loung , National University of Singapore	June 2021 - Present
Zichu Fei , Fudan University	June 2021 - Sept 2022
Jierui Li , University of Electronic Science and Technology and China	Nov 2020 - Jan 2021
Lu Xu , Singapore University of Technology and Design	2020 – 2021
Liyang Cheng , Singapore University of Technology and Design	2020 – 2021
Yuxian Zhou , Beijing Institute of Technology	2020 – 2021
Huiming Wang , Zhejiang University	2018 – 2019