Jie Cao

Research Interest

NLP Lab, University of Utah, SLC   2015 - present

I work with Prof. Vivek Srikumar. My current research centered around dialogue, meaning representation and their structured prediction:

– Dialogue System [5, 2, 1]

– Semantic Parsing, Structured Prediction
  Our parser on AMR ranked 1st in CoNLL Shared Task on Cross Meaning Representation Parsing [3]. Another work on exploiting parsing on dialogue is undersubmitting.

– Creative Language Generation [4]

CGCL Lab, HUST, Wuhan   2008 - 2012

When I was a master student, I worked with Prof. Hai Jin and Prof. Xia Xie. My research are around distributed computing and virtualization.

– Large Scale Statistical Computing, Programing Language [6, 7]

– Virtualization, Emebded Virtualization, Xen [9, 8]

Work Experience

Applied Scientist Intern at Amazon Lex, Seattle 2019, 2020

– Cross framework meaning representation parsing, ranked 1st on AMR on CoNLL 2019 shared task

– Our paper on schema-guided dialog get accepted by NAACL 2021

NLP Research Intern at Wechat AI, Palo Alto   2018

– End-to-End Goal-oriented Dialogue System [5], ranked 2nd in DSTC7 track1

– Creative Language Generation [4]

Researcher at Sohu RDC Lab, Beijing   2014 - 2015

– Datacenter-scale Hadoop, Spark DBAS, Distributed Machine Learning[6]

Research Developer at Baidu, Beijing   2012 - 2014

– Baidu Voice Assistant, Query analysis, Dialogue

– Mobile Search Anti-Attack Ecosystem, Speed optimization, ISP Gateway IP detection

SDE(Intern) at Alibaba, Hangzhou   2010 - 2011

– MySQL K-V Store, and Distributed Message Pub-Sub System

Education

2015 – Present	**Doctor of Philosophy**	
	Computer Science	
	University of Utah	
2009 – 2012	**Master of Science**	
	Computer Science	
	Huazhong University of Science and Technology (HUST)	
2005 – 2009	**Bachelor of Engineering**	
	Information Security	
	Huazhong University of Science and Technolgy (HUST)	

Prizes & Awards

2019	CoNLL Shared Task MRP, Top 1 on AMR
2019	DSTC7, Top 2 on track 1
2010	VMware Cloud Computing Innovation Cup, Top 50
2009	Google Android Innovative Idea Sharing Award
2007	"Computer World" Magzine Scholarship
2007	Microsoft Imagine Cup
	– Algorithm Challenge, Top 50 World-Wide
	– Visual Gaming Contest, Top 2 in China, 18th World Final
2006	HUST ACM Programming Contest, Top 3

Teaching & Advising

Spring 2018	TA	Structured Prediction, U of Utah
Fall 2016,2018	TA	Machine Learning, U of Utah
Fall 2008	Lecturer	Algorithm and Data Structure, HUST
2006-2008	Leader	Unique Studio Algorithm Team, HUST

Publications

[1] **Jie Cao** and Yi Zhang. "A Comparative Study on Schema-Guided Dialogue State Tracking". In: *Proceedings of NAACL 2021, To Appear*. 2021.

[2] **Jie Cao**, Michael Tanana, Zac Imel, Eric Poitras, David Atkins, and Vivek Srikumar. "Observing Dialogue in Therapy: Categorizing and Forecasting Behavioral Codes". In: *Proceedings of ACL 2019*. Florence, Italy, 2019.

[3] **Jie Cao**, Yi Zhang, Adel Youssef, and Vivek Srikumar. "Amazon at MRP 2019: Parsing Meaning Representations with Lexical and Phrasal Anchoring". In: *Proceedings of the Shared Task on MRP at the CoNLL 2019*. 2019.

[4] Zhiqiang Liu, Zuohui Fu, **Jie Cao**, Gerard de Melo, Yik-Cheung Tam, Cheng Niu, and Jie Zhou. "Rhetorically Controlled Encoder-Decoder for Modern Chinese Poetry Generation". In: *Proceedings of ACL 2019*. Florence, Italy, 2019.

[5] Shuo Sun*, Yik-Cheung Tam*, **Jie Cao***, Can-Xiang Yan, Zuohui Fu, Cheng Niu, and Jie Zhou. "End-to-end Gated Self-attentive Memory Network for Dialog Response Selection". In: *Proceedings of AAAI, DSTC7 Workshop*. 2019.

[6] Xijiang Ke, Hai Jin, Xia Xie, and **Jie Cao**. "A distributed SVM method based on the iterative MapReduce". In: *International Conference on Semantic Computing(ICSC)*. IEEE. 2015.

[7] **Jie Cao***, Xia Xie*, Hai Jin, Xijiang Ke, and Wenzhi Cao. "JRBridge: A framework of large-scale statistical computing for R". In: *Asia-Pacific on Services Computing Conference (AP-SCC)*. IEEE. 2012.

[8] **Jie Cao**, Xia Xie, and Jin Hai. "A real-time schedule system on embeded virtualization". Patent ZL201110410689.1 (CN). 2011.

[9] **Jie Cao**. "A Cache Performance Evaluaction on Xen Virtualization Platform". In: *Undergraduate Thesis*. 2009.

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