

# Jie Cao

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## EDUCATION

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| 2015 – Present | <b>Doctor of Philosophy</b><br>COMPUTER SCIENCE<br><i>University of Utah</i>  |
| 2009 – 2012    | <b>Master of Science</b><br>COMPUTER SCIENCE<br><i>Huazhong University of Science and Technology (HUST)</i>           |
| 2005 – 2009    | <b>Bachelor of Engineering</b><br>INFORMATION SECURITY<br><i>Huazhong University of Science and Technology (HUST)</i> |

## RESEARCH EXPERIENCE

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| NLP LAB, UNIVERSITY OF UTAH, SLC<br>Research Space   | 2015 – PRESENT |
| – I work with Prof. Vivek Srikumar in Utah NLP Lab. I study methods for predicting structured representations of natural language text, e.g. Semantic Parsing [4], Dialogue System [6, 3, 1].              |                |
| Intern at AWS AI, AMAZON LEX, Remote   | SUMMER 2020    |
| – Our paper on schema-guided dialog got accepted to NAACL 2021 [1]   |                |
| Intern at AWS AI, AMAZON LEX, Seattle  | SUMMER 2019    |
| – Cross framework meaning representation parsing, ranked 1st on AMR on CoNLL 2019 shared task [4]  |                |
| Intern at TENCENT, WECHAT AI, Palo Alto  | SUMMER 2018    |
| – End-to-End Goal-oriented Dialogue System [6], ranked 2nd in DSTC7 track1   |                |
| – Rhetorically Controlled Poetry Generation[5] got accepted to ACL 2019  |                |
| CGCL LAB, HUST, Wuhan  | 2008 – 2012    |
| – When I was a master student at HUST, I worked with Prof. Xia Xie and Prof. Hai Jin. My research are around large scale statistical computing, programming language [7, 8], system virtualization [10, 9] |                |

## WORK EXPERIENCE

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| Assitant Researcher at SOHU RDC LAB, Beijing   | 2014 – 2015 |
| – Hadoop, Spark, Data migration, Data security, Distributed machine learning.                      |             |
| Senior Software Engineer at ZUN CLUB, Beijing  | 2013 – 2014 |
| – Heterogeneous data intergration, Hotel recommendation system.                                    |             |
| Software Engineer at BAIDU, Beijing  | 2012 – 2014 |
| – Baidu Voice Assistant, Query analysis, Dialogue  |             |
| – Mobile Search Anti-Attack Ecosystem, Speed optimization  |             |
| Intern at Alibaba, Hangzhou  | 2010 – 2011 |
| – KV Storage, MySQL, Database Replication, Real-time Computing, Distributed Pub/Sub Data Pipeline. |             |

## TEACHING & MENTORING

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2019-2020	Mentor	Bachelor Thesis (Tarun Sunkaraneni), U of Utah
Spring 2018	TA	Structured Prediction, U of Utah
Fall 2016, 2018	TA	Machine Learning, U of Utah
2006-2008	Leader	Algorithm&Game Team, Unique Studio, HUST

## HONORS & AWARDS

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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” Magazine 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

## ACADEMIC SERVICES

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PC Member / Reviewers for ACL, EMNLP, NAACL, EACL, CoNLL, COLING, AAAI, MRP'2019, etc.

## PUBLICATIONS

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- [1] **Jie Cao** and Yi Zhang. “A Comparative Study on Schema-Guided Dialogue State Tracking”. In: *Proceedings of NAACL 2021*. 2021.
- [2] Debjyoti Paul\*, **Jie Cao\***, Feifei Li, and Vivek Srikumar. “Database Workload Characterization with Query Plan Encoders”. In: *arXiv preprint arXiv:2105.12287(To Appear in PVLDB'22)* (2021).
- [3] **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.
- [4] **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.
- [5] 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.
- [6] 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.
- [7] 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.
- [8] **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 (APSCC)*. IEEE. 2012.
- [9] **Jie Cao**, Xia Xie, and Jin Hai. “A real-time scheduling system on embedded virtualization”. Patent ZL201110410689.1 (CN). 2011.
- [10] **Jie Cao**. “Cache Performance Evaluation on Xen Virtualization Platform”. In: *Undergraduate Thesis*. 2009.