

# Zhenduo Wang

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(218) 940-1767  
zhenduow@cs.utah.edu

**EDUCATION**      **University of Utah, Salt Lake City, UT**      Aug. 2018 - Present  
Ph.D. candidate in Computer Science (Advised by Prof. Qingyao Ai and Prof. Vivek Srikumar)  
**Thesis title:** Modeling Mix-initiative Conversational Search

**University of Minnesota Duluth, Duluth, MN**      Sept. 2016 - May 2018  
M.S. Mathematics (Co-advised by Prof. Yang Li and Prof. Ted Pedersen)

**Dalian University of Technology, Dalian, China**      Sept. 2012 - Jun. 2016  
B.E. student in Department of Software Engineering

**RESEARCH EXPERTISE**      I have previously worked on many Natural Language Processing and Information Retrieval tasks, particularly conversational AI systems and natural language generation. I am also experienced with Reinforcement Learning and Imitation Learning, as they played an important part in my past research.

**PUBLICATIONS**      **Zhenduo Wang**, Yuancheng Tu, Corby Rosset, Nick Craswell, Ming Wu, and Qingyao Ai. Zero-shot Clarifying Question Generation for Conversational Search. In The Web Conference 2023 (WWW).

Tao Yang, Zhichao Xu, **Zhenduo Wang**, Anh Tran, and Qingyao Ai. Marginal-Certainty-aware Fair Ranking Algorithm. In Web Search and Data Mining Conference 2023 (WSDM).

**Zhenduo Wang** and Qingyao Ai. Simulating and Modeling the Risk of Conversational Search. In ACM Transactions on Information Systems (TOIS)

**Zhenduo Wang** and Qingyao Ai. Controlling the Risk of Conversational Search via Reinforcement Learning. In The Web Conference 2021 (WWW).

**Zhenduo Wang** and Ted Pedersen. UMDSUB at SemEval-2018 Task 2: Multilingual Emoji Prediction Multi-channel Convolutional Neural Network on Subword Embedding. In SemEval@NAACL-HLT 2018

Kevin Swanberg and Madiha Mirza and Ted Pedersen and **Zhenduo Wang**. ALANIS at SemEval-2018 Task 3: A Feature Engineering Approach to Irony Detection in English Tweets. In SemEval@NAACL-HLT 2018

## TALKS

### Conference Presentations

- “Zero-shot Clarifying Question Generation for Conversational Search.” In The Web Conference 2023 (WWW).
- “Controlling the Risk of Conversational Search via Reinforcement Learning.” The Web Conference 2021 (WWW).

	<b>Invited Talks</b> <ul style="list-style-type: none"> <li>• “Controlling the Risk of Conversational Search via Reinforcement Learning.” SCAI: Search-Oriented Conversational AI Workshop at SIGIR Conference 2022.</li> </ul>										
<b>REVIEW SERVICE</b>	<b>Academic Conferences and Journals</b> <ul style="list-style-type: none"> <li>• The Twentieth China National Conference on Computational Linguistics (CCL 2021)</li> <li>• ACM Transaction on Information Systems (TOIS-2023-0153)</li> <li>• The 32nd ACM International Conference on Information and Knowledge Management (CIKM 2023)</li> </ul>										
<b>WORK EXPERIENCE</b>	<div> <b>Research Intern at Microsoft</b> <i>May. 2022 - Aug. 2022</i> </div> <ul style="list-style-type: none"> <li>• Conducted research about Zero-shot Clarifying question generation for conversational search and published in The Web Conference 2023 (WWW).</li> </ul> <div> <b>Machine Learning Intern at Roku Inc.</b> <i>May. 2021 - Aug. 2021</i> </div> <ul style="list-style-type: none"> <li>• Conducted online and offline unbiased learning-to-rank for Roku’s Search system.</li> </ul> <div> <b>Data Scientist Intern at American Family Insurance</b> <i>May. 2019 - Aug. 2019</i> </div> <ul style="list-style-type: none"> <li>• Developed, tested, and refined a BERT based Multi-Task Learning model for home issue classification.</li> </ul>										
<b>TEACHING EXPERIENCE</b>	<div> <b>Calculus I, II, III</b> <i>Sep. 2018 - Dec. 2019</i> </div> <ul style="list-style-type: none"> <li>• Teaching assistant and discussion session lecturer</li> </ul> <div> <b>Image Processing</b> <i>Sep. 2019 - Dec. 2019</i> </div> <ul style="list-style-type: none"> <li>• Teaching assistant.</li> </ul> <div> <b>Data Mining</b> <i>Jan. 2021 - May. 2021</i> </div> <ul style="list-style-type: none"> <li>• Teaching assistant.</li> </ul>										
<b>DEVELOPING EXPERIENCE</b>	<div> <b>Magic Circle: A Card Video Game</b> <i>Jan. 2014 - Apr. 2015</i> </div> <ul style="list-style-type: none"> <li>• Fully designed and developed a card game with Unity3D engine.</li> <li>• Won the third prize in the Microsoft Imagine Cup Game Competition 2015. Video: <a href="https://v.youku.com/v_show/id_XOTIyNzAxNjAw.html">https://v.youku.com/v_show/id_XOTIyNzAxNjAw.html</a> Project: <a href="https://github.com/zhenduow/TMC">https://github.com/zhenduow/TMC</a></li> </ul>										
<b>HONOR AND AWARDS</b>	<table> <tr> <td>Outstanding Graduate Student Award at University of Minnesota Duluth</td> <td>2018</td> </tr> <tr> <td>Outstanding Graduate Teaching Assistant at University of Minnesota Duluth</td> <td>2018</td> </tr> <tr> <td>Meritorious Winner (1<sup>st</sup> prize) in Mathematical Contest In Modeling</td> <td>2016</td> </tr> <tr> <td>3<sup>rd</sup> prize in Microsoft Imagine Cup Games Competition</td> <td>2015</td> </tr> <tr> <td>Outstanding Academic Work Scholarship at Dalian University of Technology</td> <td>2014</td> </tr> </table>	Outstanding Graduate Student Award at University of Minnesota Duluth	2018	Outstanding Graduate Teaching Assistant at University of Minnesota Duluth	2018	Meritorious Winner (1 <sup>st</sup> prize) in Mathematical Contest In Modeling	2016	3 <sup>rd</sup> prize in Microsoft Imagine Cup Games Competition	2015	Outstanding Academic Work Scholarship at Dalian University of Technology	2014
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Provincial 1<sup>st</sup> prize, National 3<sup>rd</sup> prize of Chinese Mathematical Competition 2013