

## EDUCATION

<b>Department of Computer Science and Engineering, Michigan State University (01/2020 – now)</b> Ph.D. student in Computer Science and Engineering	<b>East Lansing, USA</b>
<b>School of Software &amp; Microelectronics, Peking University (09/2016 – 07/2019)</b> M.E. in Computer Technology • Overall GPA: 85/100	<b>Beijing, China</b>
<b>School of Foreign Language, Dalian Jiaotong University (09/2011 – 07/2016)</b> B.E. in English & Software Engineering • Overall GPA: 89/100, <b>Ranking: 1/80</b>	<b>Dalian, China</b>

## PUBLICATIONS

- **Zhang Y, Guo Q, Parisa Kordjamshidi. Vision-and-Language Navigation by Reasoning over Spatial Configurations.** (Non-archival on SpLU workshop of EMNLP 2020)
- Guo Q, Faghihi H R, **Zhang Y**, et al. **Inference-Masked Loss for Deep Structured Output Learning.** (IJCAI-2020)
- **Yue Zhang**, Parisa Kordjamshidi. **PE\_TU Participation at TAC 2018 Drug-Drug Interaction Extraction from Drug Labels.** Text Analysis Conference (TAC) 2018. November 13-14, 2018. Gaithersburg, Maryland, USA
- **Yue Zhang**, Liying Zhang, Yao Liu. **Linked Document Classification by Network Representation Learning.** The 17th China National Conference on Chinese Computational Linguistics (CCL) 2018. October 9-21, 2018. Changsha, China

## RESEARCH EXPERIENCE

<b>Navigation by Reasoning over Spatial Configurations (01/2020 – now)</b> <i>Advisor: Dr. Parisa Kordjamshidi, Natural Language Processing Group, Michigan State University</i> <ul style="list-style-type: none"><li>• Utilize the spatial language semantics in modeling navigation instruction to further investigate how different spatial concepts (motion indicator, landmark, spatial indicator, etc.) influence the reasoning ability of the navigation agents.</li><li>• Design a spatial configuration parser that could extract the semantic components automatically.</li><li>• Design a neural network model that incorporates the semantic components of spatial configuration.</li><li>• Introduce a state attention to guarantee that spatial configurations are executed sequentially and are aligned with the visual trajectory.</li><li>• Our work was accepted to be presented on the SpLU workshop of EMNLP 2020 and submitted on the main conference of NAACL 2021.</li></ul>	<b>East Lansing, USA</b>
<b>Scientific Briefings Automatic Generation Based on Network Representation Learning (12/2018 – 04/2019)</b> <i>Advisor: Prof. Yao Liu, Natural Language Processing Research Group, Institute of Scientific and Technical Information of China</i> <ul style="list-style-type: none"><li>• Analyzed authoritative published scientific reports to summarized entity and relationship categories; used LSTM+CRF model to extract entity and relationship from unlabeled data.</li><li>• Constructed scientific policy knowledge network; improved TriDNR with TransE model to represent chapter node, which combine the semantic, topological structure label and reasoning information; used Doc2vec to represent content node.</li><li>• Feed the node representation to TextRank algorithm and RNN model to generate scientific briefing structure and content respectively.</li><li>• The work has been summarized as my master final thesis, and recommended as the excellent final thesis (8%).</li></ul>	<b>Beijing, China</b>
<b>Drug-Drug Interaction Extraction from Drug Labels (07/2018 – 10/2018)</b> <i>Advisor: Dr. Parisa Kordjamshidi, Natural Language Processing Group, Tulane University</i> <ul style="list-style-type: none"><li>• Designed the schema of the graph and the type of linguistic units and populate data into our declared graph, which comprised of phrases, edges, properties, and knowledge-based constraints.</li><li>• Designed linguistic features as well as the pre-trained word2vec and phrase2vec features to train SVM classifiers.</li></ul>	<b>New Orleans, USA</b>
<b>Novelty Retrieval System for Analysis of Patent and Lectures (05/2017 – 03/2018)</b> <ul style="list-style-type: none"><li>• Designed a science and technology novelty retrieval system, which integrated the workflows of client, novelty retrieval experts, auditor and administrator, to assist experts to evaluate the novelty of applied projects according to the existing lecture and patents database.</li><li>• Participated in the research of retrieval function in novelty retrieval system and proposed the method to use knowledge database to recommend the related retrieval words, such as hypernyms, hyponyms and synonyms.</li><li>• The system has been deployed and run on three major Novelty Retrieval Departments in China.</li></ul>	<b>Beijing, China</b>
<b>Comparative Summarization Generation from the Corpus of Nursing (06/2017 – 09/2017)</b> <ul style="list-style-type: none"><li>• Designed the function of generating comparative summarization with two rows of abstracts from two different subject (each has 100 abstracts), and responsible for topic extraction with LDA model of each row of abstracts.</li><li>• Obtaining common attribute words of two topics, treated as the comparative benchmark. Those words are divided into basic attribute words (hypernyms, hyponyms) and polybasic attribute words (symptom, pathogenesis, diagnosis, therapy, complication and precaution.)</li><li>• Ranking the sentences which show the high-frequency topic and its attribute words simultaneously.</li></ul>	<b>Beijing, China</b>

## AWARDS

• Excellent Awards in Innovation and Entrepreneurship Program in School of Software & Microelectronics, Peking University	<b>01/2017</b>
• Outstanding Graduate Students in Liaoning Province (2%)	<b>06/2016</b>
• Second Prize in National Programs of Innovation and Entrepreneurship for Undergraduates, Dalian Jiaotong University	<b>12/2015</b>
• National Scholarship, China (2%)	<b>10/2014</b>