

## Xiao Song

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### CONTACT INFORMATION

*E-mail:* xiaos@emails.bjut.edu.cn  
*Telephone:* +86 18810779353  
*Address:* Chaoyang, Beijing, China, 100124  
*Homepage:* <https://smuze.netlify.app/>



### RESEARCH INTERESTS

Multi-modality (Vision-Language) and its combination with Healthcare and Federated, including Radiology Report Generation and Image Captioning.

### EDUCATION

**Beijing University of Technology**, Beijing, China. **September 2020 – Present**

- M.Eng, in Computer Science and Technology, GPA: 3.85/4.
- Advisor: Xiaodan Zhang

**University of Jinan**, Jinan, Shandong, China. **September 2016 – June 2020**

- B.Eng, in Computer Science and Technology, GPA: 3.48/4.
- Advisor: Lixin Du

### RESEARCH EXPERIMENT

**Research Intern**, Stanford University. **August 2022 – present**

Advisor: Liangqiong Qu

- Federated Learning on Multi-modality

**Postgraduate**, Beijing University of Technology. **September 2020 – present**

Advisor: Xiaodan Zhang

- Cross-modal Contrastive Attention Model for Medical Report Generation: mining the potential visual and semantic information from the historical cases for assisting medical report generation. (accepted by *COLING* 2022 Oral)
- Multi-scale Superpixel based Hierarchical Attention Model for Brain CT Classification: using superpixel to plot the lesion regions, extracting the appearance information and semantic information, and fusing multi-scale information from coarse to fine with a hierarchical structure. (accepted by ChinaMM2022 and recommended to *JVCIR*, in reviewing.)
- Multi-scale Superpixel based Fusion Network for Brain CT Classification. (accepted by *China Sciencepaper*.)
- A Method for Automatic Medical Report Generation based on Cross-modal Contrastive Attention Mechanis. (patent, in first trialing)

**Undergraduate**, University of Jinan. **September 2016 – June 2020**

Advisor: Lixin Du

- A class roll call system based on face recognition. (Shandong University Student Artificial Intelligence Competition, Second-Prize, Fourth Place)
- A portal game based on Unity. (Shandong University Student Software Design Competition, Second-Prize)

HONORS AND AWARDS	Academic Excellence Scholarship (Second-Class, Top 10%), Beijing University of Technology, 2020-2021.
	Outstanding Graduates, University of Jinan, 2020.
	Mathematics Competition of Chinese College Students (First Prize), 2019.
PUBLICATIONS	
	<b>Xiao Song</b> , Xiaodan Zhang, Junzhong Ji, Ying Liu, Pengxu Wei. (2022) <a href="#"><u>Cross-modal Contrastive Attention Model for Medical Report Generation</u></a> . In <i>The 29th International Conference on Computational Linguistics (COLING)</i> , Oral.
	<b>Xiao Song</b> , Xiaodan Zhang, Junzhong Ji, Ying Liu. (2022) <a href="#"><u>Multi-scale Superpixel based Hierarchical Attention Model for Brain CT Classification</u></a> . (accepted by <i>ChinaMM2022</i> and recommended to <i>JVCIR</i> , in reviewing.)
	Junzhong Ji, Menglong Zhang, <b>Xiao Song</b> , Xiaodan Zhang. (2022) <a href="#"><u>Multi-scale Superpixel based Fusion Network for Brain CT Classification</u></a> . (accepted by <i>China Sciencepaper</i> .)
PATENTS	
	张晓丹(Xiaodan Zhang), <b>宋晓(Xiao Song)</b> , 冀俊忠(Junzhong Ji). 一种基于跨模态对比注意力机制的医学报告自动生成方法(A Method for Automatic Medical Report Generation based on Cross-modal Contrastive Attention Mechanism). (CN202210563429.6, first trial)
ACADEMIC CONFERENCE	
	The 29 <sup>th</sup> International Conference on Computational Linguistics (COLING), October 12-17, 2022, Remote, Oral representation.
	China Multimedia 2022, Guiyang, China, July 20-22, 2022.
TEACHING EXPERIENCE	
	Advising the Undergraduate Thesis "基于检索的医学报告自动生成方法研究(Research on Retrieval-based Medical Report Automatic Generation)", Beijing University of Technology, 2022.
SKILLS	
	Language: Python, C++, C, Latex, PHP, HTML, Java, SQL.
	Deep Learning Frameworks: Pytorch.