QI ZHANG

qi_zhang@stu.xjtu.edu.cn | https://github.com/jasminezhang2333 | +86 15695496228

EDUCATION

Xi'an Jiaotong University
Xi'an, Shaanxi
M.Sc. in Computer Science   *2022 - Present*

· GPA: 3.5/4.0(Top 50%)

Nanjing Normal University
Nanjing, Jiangsu
B.Sc.   in Automation   *2018 - 2022*

· Graduated with the honor of "Outstanding Graduate of Jiangsu Province."

· GPA: 3.9/4.0(Top 5%), IELTS: 6.5

RESEARCH EXPERIENCE AND PUBLICATIONS

1. **Qi Zhang**, Yonghong Song, et al. CRMSP: A Semi-supervised Approach for Key Information Extraction with Class-Rebalancing and Merged Semantic Pseudo-Labeling. Neurocomputing.

2. Pengcheng Guo, Boyu Wang, Jiahao Liu, **Qi Zhang**. PLBR: A Semi-supervised Document Key Information Extraction via Pseudo-labeling Bias Rectification. IEEE Transactions on Knowledge and Data Engineering (TKDE).

3. Fei Jiao, **Qi Zhang,** et al. Balanced-to-unbalanced filtering magic-T based on circular patch resonator with high selectivity. Electronics Letters 56.23 (2020): 1257-1259 (ResearchGate⇗).

PROJECT EXPERIENCE

Web-Based Intelligent Document Information Extraction System   Xi'an, Shaanxi
Sponsored by National Natural Science Foundation Project, Project Member   *Mar 2024 - Jun 2024*

Project Description:

· Developed a system to extract key information from complex documents, focusing on named entity recognition and entity relationship extraction.

Technical Implementation:

· Utilized multimodal Transformer models such as LayoutLMv3, LiLT, and ERNIE to process documents containing rich text, layout, and visual information, reducing required parameters and overall computational load, and improving model efficiency.

· Fine-tuned pre-trained models on integrated public datasets or user-uploaded private datasets from various domains such as legal, financial, and medical.

Knowledge Graph-Based Visual Question Answering System   Xi'an, Shaanxi
Project Leader   *Sept 2022 - Dec 2022*

Project Description:

· Developed a visual question-answering system based on knowledge graphs, addressing multimodal information tasks.

Technical Implementation:

· Used ZS-VQA structure as the baseline and conducted ablation experiments on different modules. By training different feature mapping spaces (semantic space for relations, object space for supporting entities, and knowledge space for answers), the system more accurately aligned image-question pairs with answers, enhancing question-answering accuracy.

INDUSTRY EXPERIENCE

Shanghai Bilibili Technology Co., Ltd.   Shanghai
Algorithm Engineer   *Summer 2024*

Project Description: Engaged in academic research related to OCR, NLP and large language modeling (LLM), and responsible for the daily maintenance and research and development of the company's core products for video comprehension and content security.

Wuxi Zhongke Suhui Automation Technology Co., Ltd.   Wuxi, Jiangsu
Algorithm Engineer   *Jan 2022 - Jun 2022*

Project Description: Developed an automated road environment analysis system for autonomous driving, using image processing techniques for precise detection and recognition of key road targets and lane information.

Nanjing Normal University   Nanjing, Jiangsu
Laboratory Research Assistant— Advisor: Prof. Gang Zhang   *Summer 2021*

· Responsible for the design and simulation of 5G communication filters at the State Key Laboratory of Millimeter Waves.

AWARDS

Academic Scholarship   *2022, 2023*

Sponsored by Xi'an Jiaotong University.

· Awarded a scholarship covering tuition fees and living expenses supporting post-graduate studies in the field of Computer Science.

NARI First-Class Scholarship   *2019*

Sponsored by NARI Technology Co., Ltd.

EXTRACURRICULARS

Visiting Student at Winter Academic Research Seminar 2024 in Artificial Intelligence   *2024 Winter*
held at Maxer Institute and Cambridge Colleges

· Conducted a preliminary research project under the guidance of Professor Pietro Lio' and Professor Nicholas D. Lane in this programme.

SKILLS

· **Programming Languages:** Python, Java, C, C++, SQL
· **Tools/Technologies:** Git, Pytorch, Tensorflow, Matplotlib, NLTK, LaTeX, Jupyter, OpenCV
· **Languages:** English (proficient), Chinese (native)

Last updated June 1, 2024