

QI ZHANG

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EDUCATION

Xi'an Jiaotong University

M.Sc. in Computer Science

- GPA: 3.5/4.0(Top 50%)

Xi'an, Shaanxi

2022 - Present

Nanjing Normal University

B.Sc. in Automation

- Graduated with the honor of "Outstanding Graduate of Jiangsu Province."
- GPA: 3.9/4.0(Top 5%), IELTS: 6.5, CET-6: 520

Nanjing, Jiangsu

2018 - 2022

RESEARCH EXPERIENCE AND PUBLICATIONS

1. 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[↗]).
2. **Qi Zhang**, Yonghong Song, et al. CRMSP: A Semi-supervised Approach for Key Information Extraction with Class-Rebalancing and Merged Semantic Pseudo-Labeling. Neurocomputing.
3. Hao Lin, Zhixiang Wang, **Qi Zhang**, et al. Multimodal Deformable medical image registration based on feature perceptual contrast learning. Medical Image Analysis.
4. 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).
5. Hao Lin, Fei Li, **Qi Zhang**, et al. GMmorph: Dynamic Spatial Matching Registration Model for 3D Medical Image based on Gated Mamba. Knowledge-Based Systems.

PROJECT EXPERIENCE

Web-Based Intelligent Document Information Extraction System

Sponsored by National Natural Science Foundation Project, Team Member

Xi'an, Shaanxi

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

Project Leader

Xi'an, Shaanxi

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

Wuxi Zhongke Suhui Automation Technology Co., Ltd.

Algorithm Engineer

Wuxi, Jiangsu

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

Laboratory Research Assistant— Advisor: Prof. Gang Zhang

Nanjing, Jiangsu

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

held at Maxer Institute and Cambridge Colleges.

2024 Winter

- 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