Yong Tao

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SUMMARY

I demonstrate my research interests in Remote Sensing, large language models, and multimodal foundation models, with a focus on their robustness and reliability. Driven by a strong desire to make a meaningful impact in these fields, I intend to pursue a PhD to contribute to both academia and society by leveraging the theoretical knowledge and skills gained throughout my academic journey. With my self-motivation, ability to work independently, and strong English communication skills, I believe I will thrive in my prospective PhD studies.

EDUCATION

University of Exeter Exeter, UK
Master of Philosophy (MPhil), PhD Track in Computer Science 07/2025 - Present
Overall GPA: 85.47/100
Research focus: Remote Sensing, Large Language Models, Multimodal Foundation Models, and Robustness.

Guilin University of Electronic Technology Guilin, China
Master of Engineering (Meng) in Computer Science and Technology 09/2020 - 06/2023
Overall GPA: 85.47/100
Courses: Combinatorics, Advanced Computer Networks, Advanced Data Structures and Algorithm Analysis, Big Data Processing Technology, Digital Image Processing, Experimentation of Software System, Advanced Computer Architecture, The UML Method of Software Engineering, etc.

Yangzhou University Yangzhou, China
Bachelor of Engineering (BEng) in Computer Science and Technology 09/2015 – 06/2019
Overall GPA: 3.24/4
Courses: Advanced Mathematics, Linear Algebra, Data Structures, Probability Theory and Mathematical Statistics, Operating System Principles, Computer Graphics, Algorithm Design and Analysis, Cloud Computing Experiments, Compilation Principles, Software Engineering, Computer Introduction, Database System Principles, etc.

PUBLICATION

[1] Li X, **Tao Y**, Zhang S, et al. "REOBench: Benchmarking Robustness of Earth Observation Foundation Models.", *NeurIPS 2025*, accepted. [arXiv preprint arXiv:2505.16793, 2025.]
[2] Z Deng, **Y Tao**, H Peng, R Yang, R Lan, "Kcr-FLAT: A Chinese-Named Entity Recognition Model with Enhanced Semantic Information", *Sensors*, *Volume 23, Issue 4*, https://doi.org/10.3390/s23041771

NOTABLE SKILLS AND TECHNIQUES

Programming: C/C++, Java, Python
Techniques: Deep Learning, Linux Programming, Android Development

RESEARCH EXPERIENCES

Research and Application Demonstration of Key Technologies for Intelligent Court Assistance in Trials
Supervisor: Professor Zhenrong Deng 10/2020 – 09/2023
Research Scope:
This study investigates key technologies for intelligent court-assisted adjudication, including judicial named entity recognition technology, automated judgment document generation technology, and intelligent sentencing technology. Additionally, it designs and develops an intelligent court-assisted adjudication system to provide decision support for the courts, improving work efficiency and enhancing the quality of adjudications.
Responsibilities:

- Assisted in exploring and analyzing the research (i.e., idea, research scope) and technology (i.e., solution/feasibility) of the project according to the concept of "Smart Court".
- Conducted research on one of the project's key technologies, "Judicial Named Entity Recognition Technology", including dataset creation, algorithm design, and experimentation.
- Responsible for archiving and managing project materials, as well as writing the research report.

Achievements:

- Publish one journal article.
- Obtained one authorized Chinese patent.

Research on Chinese Named Entity Recognition Algorithm Based on Fusion of Multiple Semantic Features
Postgraduate Dissertation (Supervised by Professor Zhenrong Deng) 09/2021 – 06/2023
Responsibilities:

- Conducted in-depth research on Chinese named entity recognition technology that integrates multiple semantic features.
- Proposed the syntax-enhanced Chinese named entity recognition model Kcr-FLAT and the multi-semantic fusion model MSFNet, improving the accuracy of Chinese named entity recognition.
- Wrote and completed postgraduate dissertation based on experimental results.

Design on APP-based Environmental Information Detection System
Undergaduate Dissertation (Supervised by Professor Yiqi Gui) 05/2017 – 05/2018
Responsibilities:

- Developed and managed the overall project plan, ensuring alignment with academic goals and requirements.
- Led the design and development of the mobile application, focusing on creating a user-friendly interface and efficient backend for environmental data collection and analysis.

Achievements:

- Successfully developed and launched the atmospheric pollution detection system app.
- Obtained a software copyright for this mobile application.

PRACTICAL EXPERIENCES

Guangxi Key Laboratory of Image and Graphic Intelligent Processing Guilin, China
Research Assistant 09/2023 – 09/2024

Responsibilities:

- Responsible for designing and implementing experimental code, ensuring its efficiency and reliability; Collaborated with team members to optimize algorithms and data processing workflows; Guided students in experiments conducting, helping them complete their research projects.
- Wrote and edited research grant proposals, ensuring the completeness and professionalism of the application materials; Collaborate with team members to develop research plans and budgets, ensuring the application materials meet the requirements of funding agencies.
- Responsible for regular maintenance and management of laboratory servers and for resolving technical issues to ensure smooth operations; Installed and updated server software, regularly backing up data to prevent data loss.

OTHERS

Awards: Postgraduate Academic Scholarship, awarded by Guilin University of Electronic Technology 11/2021

Hobbies: Travelling, Cooking, Guitar

Languages: Chinese- Native; English- Fluent(IELTS 7.0)