## Peiqi Gao

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## **EDUCATION**

#### **08/2024-Present** Washington University in St.Louis Ph.D. in Computer Science and Engineering (advised by Dr. Chenyang Lu) 08/2023-Present Washington University in St.Louis M.S. in Computer Science and Engineering 08/17/2022-12/16/2022 University of California, Berkeley (exchange program) Courses: Introduction to Artificial Intelligence(A-); Numerical Solution of Differential Equations\* (advanced honor class); Discrete Mathematics and Probability Theory(A) Wuhan University, School of Computer Science (Hongyi Honor College) 09/2019-07/2023 Major: Computer Science and Technology | GPA: 3.63 (Top 20%) • Dean's Scholarship of excellency 2019.2020.2021&2022 •

• Main courses: Advanced Mathematics; Linear Algebra; Data Structure; Computer Network; Computer System: A Programmer Perspective; Computer Organization; Introduction to AI; The introduction to Algorithm; Machine Learning and Pattern Recognition; Software Engineering

## **RESEARCH INTRESETS**

Machine Learning | Deep Learning | Computer Vision | Vision Language Models

## **PUBLICATIONS**

• Wang, R., Wang, Z., **Gao**, P., Li, M., Jeong, J., Xu, Y., ... & Lu, C. (2024). Real-Time Videobased Human Action Recognition on Embedded Platforms. arXiv preprint arXiv:2409.05662. (In submission)

## **RESEARCH PROJECTS**

#### Smart Kitchen

Supervisor: Chenyang Lu (Professor, Washington University in St. Louis)

- Human Action Recognition (HAR): Fintune Vision-Language Models (Qwen2.5VL, LLaVA-Video) on customized dataset for human action recognition when cooking oatmeals.
- State Detection: Using pretrained Vision-Language Models (Qwen2.5VL, GPT-40) inference on customized dataset for extracting states information (the setting of a stove, the position of a pan) to help refine the HAR result.
- Sequencing Error Detection: Using the result from HAR, detect the sequencing errors during oatmeal cooking to provide real-time reminders for omissions or unsafe behaviors, enhancing safety and independence at home.

08/2023-now

# The Realization of Named Entity Recognition for Information Analysis on a Small Data Set through<br/>Cross Prediction09/2021- 05/2022

Supervisor: Guorui Ma (Wuhan University)

• Establish the damage analysis system; perform implementation of language information extraction; use the current mainstream BERT and CRF models to build the prediction model; utilize cross prediction method to annotate other data sets

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## HONORS AND CERTIFICATES

Wuhan University Freshman Scholarship	2019-2020
China Computer Federation Certified Software Professinal (CCF CSP) score: 220 (Top 20%)	04/2022
Distinction in The Chinese Mathematics Competitions	11/2020
China mathematic Olympiad First Prize (Top 1%)	10/2018

## **PROGRAMMING SKILLS**

- Language: Python, C\C++, Java, HTML\CSS\JS, Latex
- Libraries: PyTorch, Pandas, Numpy, Vue

## LANGUAGE SKILLS

- Chinese Native
- English High proficiency