Yanlin Li 李岩霖

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Education

National University of Singapore, School of Computing   2024.08-2026.01
Master of Computing (Artifical Intelligence)
Shandong University, School of Software   2020.09-2024.06
*Bachelor of Software Engineering (Artificial Intelligence)   Overall GPA: **90.27/100***

Research Experience

The Centre for Trusted Internet Community, National University of Singapore   2024.12-Present
Research Assitant,   advised by Prof. Mong-Li Lee and Prof. Wynne Hsu and Dr. Hao Fei
- Multi-modal LLMs: cross-modal interleaved benchmark

AIoT Lab, Shandong University   2022.10-2024.06
Research Assitant,   advised by Prof. Yiran Shen
- ML System: Eye tracking based on virtual reality (VR) and dynamic resource configuration of computing power networks based on queueing theory

Publications

[1] Yanlin Li, Ning Chen, Guangrong Zhao,Yiran Shen. KD-Eye: Lightweight Pupil Segmentation For Eye Tracking on VR Headsets via Knowledge Distillation. (WASA 2024, CCF-C) [Paper]

[2] Yanlin Li, Hao Liu, Huimin Liu,Yinwei Wei, Yupeng Hu. MIST: Towards Multi-dimensional Implicit Bias and Stereotype Evaluation of LLMs via Theory of Mind. (arXiv 2025) [Paper]

[3] Ziming Cheng, Binrui Xu, Lisheng Gong, Zuhe Song, Tianshuo Zhou, Shiqi Zhong, Siyu Ren, Mingxiang Chen, Xiangchao Meng, Yuxin Zhang, **Yanlin Li**, Lei Ren, Wei Chen, Zhiyuan Huang, Mingjie Zhan, Xiaojie Wang, Fangxiang Feng. Evaluating MLLMs with Multimodal Multi-image Reasoning Benchmark. (arXiv 2025) [Paper]

Projects

2023.09-2024.09   CPN-DGoL: A Dynamic Resource Configuration Solution Methodology of CPNs
Independent First Author
- Proposed a dynamic resource configuration solution methodology of CPNs via deep generative model-aided online learning from the perspective of demand response, to maintain the balance between supply and demand of computing resources dynamically to maximize expected revenue of the CPNs service provider
- Our methodology does not require any asymptotic scaling of the scale of queueing service system of the CPNs, and the fidelity of the optimal allocation solution of computing power resources is higher. The non-parametric form of implicit distribution that can reduce the input of a priori knowledge of the distribution information.
- Constructed a gradient estimator based on the data collected in the previous run cycle to dynamically update the service resource configuration in order to achieve a kind of dynamic decision making that maximizes the expected revenue.

2022.10-2023.01   KD-Eye：Lightweight Pupil Segmentation For Eye Tracking via Knowledge Distillation
Independent First Author
- From Area-of-Interest exaction to Coarse segmentation and then refined segmentation via Knowledge Distillation.
- Maintained the accuracy on par with that of baseline but consumed only 1-2% computation and memory resources of the baseline.
- Achieved processing rate about 160fps which is over 240 times faster than competing approach.

2023.06-2023.07   Implementing Defect Detection in Industrial Products via Deep Learning
Project Leader
- Project training in cooperation between School of Software, Shandong University and Intel Asia Pacific Research and Development Ltd., trained the AI model and establishing Web and WeChat applet services on the basis of balancing accuracy and reasoning time, under the supervision of Prof. Hongjun Dai and AI Software Solutions Engineer Jianyu Zhang.
- Led the team and was in charge of backend development, data processing, model training, inference acceleration, frontend-backend integration, and software testing.
- Selected pre-trained models based on the TensorFlow framework and fine-tuned them on an industrial products dataset. Conducted training on ResNet and VGG series models. Chose the VGG19 model for its balance between inference speed and accuracy, achieving a model accuracy of 90.972% with an average inference time of 0.3 seconds
- Developed the backend via the Flask framework. Expanded training data through data augmentation techniques. Compressed the model using the Intel Neural Compressor library. Conducted Selenium automated testing on the system.

2023.05-2023.07   **A Multi-modal Data Fusion-Based Method for Wind Blade Monitoring**

Principal Researcher

- Cooperation with CNNC Xinhua Power Development and Investment Company, under the supervision of Prof. Yiran Shen and Prof. Lingguo Bu.
- Assumed the role of a key project member and simulated wind turbine blade rotations at various damage levels to acquire data with different modes. Trained detection models based on both sound and vibration signals as well as image data. Implemented decision-level fusion based on the output of these two models to obtain the final detection results.
- Took charge of training the detection model based on a combination of sound and vibration signals. Utilized a sliding window mechanism to capture raw data, calculated the Mel-frequency cepstral coefficients (MFCC) for sound and vibration signals, and inputted these features into the model for training. Fused the feature vectors and derived the detection results.

2021.09-2022.06   **An Analysis of Current Status of TCM Services for Community in Lixia District**

Principal Researcher

- This project investigates the current situation of the development of community-based TCM healthy aging services for the elderly in Lixia District. Through the questionnaire survey to understand the needs of the elderly and the evaluation status of the service, combined with the data model to analyze the influencing factors of the willingness of the elderly to receive TCM healthy aging services and the degree of demand satisfaction.
- Focused on data analysis in the field. Worked with data collected through surveys and applied the K-means clustering algorithm to group factors that influenced the willingness of senior citizens to choose traditional Chinese medicine (TCM) healthcare services.
- Conducted a multivariate logistic regression analysis to prioritize these influencing factors and created a profile of different user segments.
- Our project won Second Prize in the Zhengda Cup 12th National Student Market Research and Analysis Competition National Final. A total of 708 universities and 31,898 teams participated in the competition in the undergraduate division. There were 211 teams that won second place and above, a percentage of 0.66%.

Honors & Awards

NUS GRTII Master's Scholarship (SGD 45,000), *NUS Guangzhou RTII (**voluntarily declined**)*   2024.08
Meritorious Winner, *The Interdisciplinary Contest in Modeling (ICM)*   2024.05
Outstanding Graduate (Undergraduate), *Shandong University*   2024.01
Second Prize (RMB 10,000), *2023 Summer Intel oneAPI Campus Hackathon Competiton*   2023.11
Third Prize, *Shandong University Academic Scholarship*   2023.10
First Prize, *Shandong University Specialty Scholarship in Entrepreneurship Practice Category*   2023.10
Third Prize, *National College Student Mathematical Modeling Competition in Shandong Region*   2022.11
Third Prize, *Shandong University Academic Scholarship*   2022.10
Second Prize, *Shandong University Specialty Scholarship in Entrepreneurship Practice Category*   2022.10
Second Prize, *The 12th National Student Market Research and Analysis Competion National Final (top 0.66%)*   2022.05
Second Prize, *2021 Asia and Pacific Mathematical Contest in Modeling*   2022.01

Skills

English：IELTS(6.5); CET- 4(506); CET- 6(464)
Programming Languages：Python; Java; C++; HTML; CSS; JavaScript; SQL
Frameworks：PyTorch; TensorFlow; Vue; SpringBoot; Flask

Service

Reviewer：IJCNN 2025, ICIC 2025, ACM MM 2025
Chanllege Organizer：
- (ResMM) Truthful and Responsible Multimodal Learning Challenge@ACM MM 2025