Zhenghao He

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EDUCATION

Tongji University   **Shanghai, China**

Bachelor of Engineering in Computer Science and Technology   *Sept 2020 – July 2024(expected)*

GPA: 4.35/5.00, 88.50/100

Core courses: Pattern Recognition, Machine learning, Operating Systems, Data Structures, High-Level Language Programming, Discrete Mathematics, Formal Languages and Automata

PUBLICATIONS

- **Zhenghao He**, Ruifan Chen, Yayue Hou, Fei Xie, Xiaoliang Gong, and Anthony G. Cohn. "A Music Labeling Model Based on Traditional Chinese Music Characteristics for Emotional Regulation." *In Proceedings of the 2023 12th International Conference on Software and Computer Applications*, pp. 53-58, February 2023.

- Fei Xie, Xiaoliang Gong, **Zhenghao He**, Tongqi Wu, Yan Lu, and Mohan Zhao. "Alzheimer's Disease Early Diagnosis Based on Resting-State Dynamic Functional Connectivity." *In Proceedings of the 2023 12th International Conference on Software and Computer Applications*, pp. 356-361, February 2023.

- Mohan Zhao, Lu Pang, Yan Lu, Fei Xie, **Zhenghao He**, Xiaoliang Gong, and Anthony George Cohn. "Conditional Domain Adaptation Based on Initial Distribution Discrepancy for EEG Emotion Recognition." *CLIP@MICCAI 2022: Clinical Image-Based Procedures,* pp. 72-81, January 2023.

- **Zhenghao He**. "Comparison Of Different Machine Learning Methods Applied To Obesity Classification," *2022 International Conference on Machine Learning and Intelligent Systems Engineering*, pp. 467-472, November 2022.

PROJECTS

BrainBeats - a Portable Brain-Computer Interface Device for Fatigue Detection   **Shanghai, China**

Team Leader; Advisor: Assoc Prof. Xiaoliang Gong, Tongji University   *Feb 2023 – April 2024*

- Designed and conducted fatigue tests, and organized participants to collect data for the experiment.
- Preprocessed the collected data by applying a bandstop filter, and calculated the power spectrum characteristic values using the Hamming window and Fast Fourier Transform (FFT)
- Utilized SVM and LSTM for prediction and conducted ten-fold cross-validation
- Achieved an accuracy rate of $82.05\pm4.97\%$ on the most accurate device
- Awarded as the Shanghai Innovation and Entrepreneurship Training Program

INTERNSHIP

Alibaba Cloud   **Shanghai, China**

AI Model Optimization Intern   *Mar 2024 – present*

- GPU fault prediction algorithm design, GPU abnormal data processing and augmentation
- Research and analysis of AI Agents algorithm

Digital Center, HaaenClean Group   **Shanghai, China**

Digital Engineer Intern   *Sep 2023 – Dec 2023*

- Apply Isolation Forest to process historical data and identify outlier values to ensure the safety of the detection
- Assist the company in deploying a large language model on-premises for private use

Shanghai Research Institute for Intelligent Autonomous Systems   **Shanghai, China**

Research Assistant for Assoc Prof. Zhongpan Zhu, Tongji University   *Jun 2022 – Sep 2022*

- Assisted the advisor in preparing PowerPoint slides on the topic of bionic robots.
- Draft a patent under the instruction of the professor – Algorithm of Generating Heat Map for Driver's Attention

HONORS & AWARDS

3rd Prize (School-level), 2023 Excellent Student Scholarship at Tongji University   Dec 2023

2nd Prize (National Level), 2022 Embedded System Design Invitational Contest (Intel Cup)   *Aug 2022*

Bronze Medal (School-level), China College Students Internet+ Innovation and Entrepreneurship Competition   *Aug 2022*

OTHERS

Computer skills: C/C++, Python, Java, Verilog, Assembler, MS Office

Languages: Chinese (Native), English (Advanced)