Huaiguang Cai

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Education

2022 – 2025 **Institute of Automation, Chinese Academy of Sciences**, Beijing, China.
Master Student, Advisor: Dr. Wensheng Zhang.
Major: Pattern Recognition and Intelligent System, GPA: 3.84/4.00.

2018 – 2022 **Sun Yat-Sen (Zhongshan) University**, Guangzhou, China.
Bachelor Degree, Advisor: Dr. Zhi Zhou & Dr. Chang-Dong Wang.
Major: Computer Science, GPA: 3.9/4.0.

Research Interests

My research aims to develop **reliable**, **explainable**, and **practical** decision-making algorithms. My interests include LLM, algorithmic game theory, and online learning theory.

Publications

INFOCOM 2024 **Huaiguang Cai**, Zhi Zhou, and Q. Huang, "Online Resource Allocation for Edge Intelligence with Colocated Model Retraining and Inference," in IEEE Conference on Computer Communications, Vancouver, Canada, May 20–23, 2024. (CCF-A).

Submmited to ICLR **CHG Shapley: Efficient Data Valuation and Selection towards Trustworthy Machine Learning**.
Explainable Decision-making: Attribute model performance to training data.

The Visual Computer **CAMs as Shapley Value-based Explainers**.
Explainable Decision-making: Attribute model prediction to input features.

Project

2021 – 2022 **Recommendation System**, Bachelor Thesis, Sun Yat-Sen University.
A Bipartite GNN-based Recommendation with Dynamic Multi-negative Sampling.

2022 – 2023 **Online Learning and Game Theory Review (in Chinese)**, *19 pages*.
Link: `https://caihuaiguang.github.io/my_summary/OL/OL_GT2.pdf`

2023 – 2024 **Ad Auction**, *Brand Advertising*, Intern, ByteDance, Ocean Engine.

2022– Now **Learning in Games**, Independent Researcher.
Experimentally observed that predictive CFR algorithms converge faster in last-iterate than average-iterate in non-HUNL two-player zero-sum games; acknowledged by Prof. Gabriele Farina, MIT. Ongoing theoretical investigation will further explore this finding.

2024– Now **DocQA**, *Large Language Model*, Intern, MiniMax.

Skills

Programing C/C++, Python, LaTeX, MATLAB.

Other Guitar, Rowing.