Yujia Wang

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EDUCATION

Beijing Institute of Technology — Beijing, China
M.Res., Computer Science (ongoing) — 2021 - Present
Supervisor: *Haoran Yu*
GPA: 3.70/4.00

Huazhong Agricultural University — Wuhan, China
B.S., Computer Science ***(cum laude)*** — 2016 - 2020
Supervisor: *Jianxiao Liu*
GPA: 3.47/4.00

RESEARCH INTERESTS

AI for social good.

- Develop and deploy AI solutions to address real-world data-driven problems and create more social impact.
- Employ an interdisciplinary approach, such as integrating insights from psychology, sociology, and economics, to make AI-based solutions explainable and insightful.

PUBLICATIONS

*Authors marked with * are my supervisors. Authors marked with # have equal contributions.*

Yujia Wang, Haoran Yu*. "Predicting Human Behaviors by Integrating Game Theory and Machine Learning." *Under review.*

Liguang Wang#, **Yujia Wang#**, Yi Fu, Yunge Gao, Jiawei Du, Chen Yang, and Jianxiao Liu*. "AFSBN: A Method of Artificial Fish Warm Optimizing Bayesian Network for Epistasis Detection." *IEEE/ACM transactions on computational biology and bioinformatics* 18, no. 4 (2019): 1369-1383.

RESEARCH EXPERIENCE

Predicting Human Behaviors by Integrating Game Theory and Machine Learning
Beijing Institute of Technology | Supervisor: Haoran Yu — 2021.11-Present

- Developed a three-stage framework integrating game theory and machine learning to predict human behaviors in strategic environments (e.g., penny auctions).
- This framework outperformed game theory-based approaches and machine learning-based approaches on synthetic and real data even when there exists a large domain shift.

NUS Summer Workshop:
Mining Communities in Big-Data with Algorithms and Computational Thinking
National University of Singapore | Supervisor: Prof. Hon-Wai Leong 2019.7-2019.8

- Proposed and designed the project of *Depressive Community Detection and Analysis* and got a personal grade of A-.
- Built a social network of Weibo (China's equivalent of Twitter) users based on text similarity and utilized community detection algorithms to identify potential "depressive" groups and their features (e.g., possible causes of depression).

AFSBN: A Method of Artificial Fish Swarm Optimizing Bayesian Network for Epistasis Detection
Huazhong Agricultural University | Supervisor: Jianxiao Liu 2017.11-2019.11

- Aimed to detect the interactions between genes (e.g., epistasis) by optimizing the structure of the Bayesian Network using the Artificial Fish Swarm Algorithm.
- This method worked well in simulated data and real AMD data.

INTERNSHIP

Research Institute of Taikang Insurance Group Beijing, China
Data Scientist 2023.8-Present

- Applied machine learning techniques to analyze data on invoices and insurance cases, identifying potential invoice reversals that could lead to insurance fraud. Cleaned data in Neo4j Database and investigated potential fraud communities.
- Improved prediction accuracy by 3 times compared to previous methods. Discovered new characteristics of insurance fraud.

AWARDS AND SCHOLARSHIPS

First-Class Academic Scholarship from Beijing Institute of Technology 2022
Freshman Scholarship from Beijing Institute of Technology 2021
Bachelor's Degree with Highest Honors from Huazhong Agricultural University 2020
Merit Student (3 years in a row) from Huazhong Agricultural University 2016-2019
Second Prize in the National English Competition for College Students (Top 3%) 2018

TECHNICAL

Languages
English (fluent), Chinese (native).

Programming Skills
Python, Pytorch, R, and Sql.

Research Software and Skills
Git, Visio, and LaTeX