

Hua Tang

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SJTU, 800 Dongchuan Road, Shanghai, China

EDUCATION

Bachelor of Shanghai Jiao Tong University(SJTU), School of Mechanical Engineering *Sep.2020 - Jun.2024(Expected)*

Major in Industrial Engineering

Core Courses: Programming Ideas and Methods (C++) , Probability Theory and Mathematical Statistics, Data Structure, Engineering Statistics, Quality Management, Operations Research

Minor in Mathematics and Applied Mathematics

Core Courses: Stochastic Process, Partial Differential Equations

SELECTIVE RESEARCH EXPERIENCE

Research on Algorithm Fairness *Jul. 2023 – Present*

Advisor: Mengnan Du, Assistant Professor, Department of Data Science, New Jersey Institute of Technology (NJIT)

- Discerned the shape of the fairness-accuracy trade-off curve and revealed the possible abrupt decline in accuracy when over-pursuing fairness.
- Submitted a manuscript as the first author for the the 38th Annual AAAI Conference on Artificial Intelligence (AAAI2024)

Research on Skeleton-based Human Motion Quality Assessment *Mar.2023 - Present*

Advisor: Yongxiang Li, Associate Professor, Department of Industrial Engineering and Management, Shanghai Jiao Tong University(SJTU).

- Proposed a novel method integrating the Transformer and hierarchical Spatio Temporal-Graph Convolution Network to extract the inner attributes to improve the basic ST-GCN for skeleton-based human motion quality assessment.

Research on high-frequency trading strategies for quantitative hedge funds *Jul. 2022 – May.2023*

Advisor: Tongxin Ren, Assistant Professor, Student Innovation Center, SJTU

- Developed the LSTM-based regression model for high-frequency trading circumstances to extract the inner trend of the quantitative hedge funds from the high level with the sign prediction accuracy of 83.1% on experiment dataset.

PUBLICATION

Abrupt Decline of Accuracy in Over-Pursuit of Algorithmic Fairness: A Closer Look at the Accuracy-Fairness Trade-off Curve

In submission to AAAI2024 (The 38th Annual AAAI Conference on Artificial Intelligence)

Author: Hua Tang, Lu Cheng, Mengnan Du

SELECTIVE AWARDS & HONORS

2nd price in 18th National Competition of Transport Science and Technology for Students(NACTranS)(Top 5%) *2023*

Meritorious Winner in the Mathematical Contest in Modeling (Top 20%) *2023*

1st Price in 17th "Dongfeng Nissan Cup" Tsinghua IE Sword National Industrial Engineering Case Study Competition *2022*

SKILLS

- Professional Tools:** Python, C++, MATLAB, and SQL with relevant project experience
- Deep Learning Frameworks:** Keras, TensorFlow, and PyTorch