

Huixin MA

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EDUCATION

Xidian University

Xi'an, China

- *M.Eng. in Computer Science and Engineering*

Sep. 2021 – Jun. 2024

- Cumulative GPA: **85.31/100**
- Relevant Course: Matrix Theory (89), Intelligent Target Recognition and Classification (88), Basics of Pattern Recognition (83), Artificial Intelligence Innovation Experiment (97), Software Frontier Technology (90)

Hainan University

Hainan, China

- *B.Eng. in Information Security*

Sep. 2017 – Jun. 2021

- Cumulative GPA: **82.46/100**
- Relevant Course: Computer Networks (90), Database System (86), Basics of Information Security (86), Information Theory and Coding (88), Applied Cryptography (84)

PUBLICATIONS

[1] Ma, H., Wu, K., Wang, H., & Liu, J. (2023). Higher-order Knowledge Transfer for Dynamic Community Detection with Great Changes. *IEEE Transactions on Evolutionary Computation* (**Q1, IF=16.497**)

[2] Ma, H., et al. (2023). The Impact of Population Network Structure on Genetic Algorithm. Submitted to *Information Sciences* (**Q1, IF=8.233**)

RESEARCH EXPERIENCE

School of Artificial Intelligence, Xidian University

Xi'an, China

- *Postgraduate Researcher on Dynamic Community Detection Problems*
 - The first work to focus on the dynamic community detection problems with great changes and then give a simple but effective solution.
 - The higher-order knowledge transfer strategy was proposed to reduce the negative effect but enhance the positive effect when great changes occur by measuring the overlapping degree of high-order temporal smoothness.

School of Artificial Intelligence, Xidian University

Xi'an, China

- *Postgraduate Researcher on Genetic Algorithm*
 - Inspired by a paper on biological structure published in *Communications Biology*, this work aims to study how population structure affects the rate of evolution.
 - Three different methods are proposed to explore the optimal population structure during the run to maximise the GA performance. The analysis results obtained also have a good reference for other optimization problems.

PROJECTS

Data Augmentation Based on CLSP Model

Xi'an, China

- *Undertake works:*
 - Analysed users' demand and wrote corresponding documents for data augmentation.
 - Utilizing CLSP model, VAE model and TimeGAN model to implement data augmentation.

Self-Adaptive Optimization Algorithm Based on Sliding Window

Xi'an, China

- *Undertake works:*
 - This project came from the Shuyou Cup: CIOC2023 Second National Intelligent Optimization Algorithm Competition Multi-Objective Optimization, and we finally won a Provincial First Prize.
 - We proposed a self-adaptive optimization algorithm based on sliding-window, which is inspired by the strategy of trial and error in reinforcement learning. Concepts such as rewards and result feedback are considered to select the algorithm during the run. .

SKILLS

- **Languages:** Mandarin Chinese (native), English (fluent)
- **Software:** Cisco Packet Tracer, Typora, MySQL, MATLAB, Python, Microsoft Office, etc.