

HAONAN WANG

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English name: Haonan Wang

Chinese name: Wang Haonan

Gender: Male

Date of birth: 2000.06.28

EDUCATION

M.S.E Johns Hopkins University (JHU) , MD , U.S.A. Sep 2023-Dec 2024

■ **Major:** Computing Science

■ **Research :** Whiting School of Engineering(Advisor: Jason Eisner)

B.S Liaoning Technical University (LNTU), Liaoning, China Sep 2019-July 2023

■ **Major:** Information and Computing Science

■ **Research :** Institute of Mathematics and Systems Science(Advisor: Wei Liu)

Institute of Machine Learning and Data Mining (Advisor: Yu Zhang)

Dissertation (Anticipated): **RESEARCH ON THE APPLICATION OF HUMAN**

ACTION RECOGNITION BASED ON LSTM-CNN

HONORS AND DISTINGUISHED RESEARCH SOCIETY RECOGNITION

China National Scholarship

2022

National-level award in China,

The China National Scholarship is the highest-level scholarship funded by the central government, and it is the highest honorary-level national scholarship that students of Chinese colleges and universities can obtain. Once a year, 30 million students compete, and the proportion of awards is only 0.2%. The purpose of the establishment is to encourage all students in Chinese colleges and universities to study diligently, strive for progress and develop in an all-round way, and to commend to the whole country the full-time students of colleges and universities who have made significant contributions to the development and construction of the country and schools, and have an excellent academic performance during school, social practice, innovation ability, scientific research level, and comprehensive quality.

Member, CCF

2023-present

China Computer Federation

National Honorary Certificate

China Computer Society (CCF) is the largest and highest level academic organization in computer and related fields in China. CCF holds hundreds of academic conferences, industrial and technical forums and trainings of various scales and levels every year, and carries out a series of activities such as award evaluation, competition, computer professional qualification certification, science popularization, and computer terminology validation. CCF has 16 working committees, 40 professional committees, 7 "Computing + industry" chapters, and 38 local member activity centers. Relying on a three-dimensional and multi-dimensional governance structure, through the above various forms of brand activities, we serve computer professionals, enterprises, scientific research institutions and organizations around the world. The aim is to provide services for the academic and professional development of

professionals in the field; To promote academic progress and the application of technological achievements; Conduct academic evaluation and lead the academic direction; To recognize and commend individuals, enterprises and units with outstanding academic and technical achievements.

Member, CSOOPEM

2019-present

Chinese Society of Optimization, Overall Planning, and Economic Mathematics

National Honorary Certificate

The China Research Society of Optimization Method, Overall Planning and Economic Mathematics, initiated by the famous mathematician Professor Hua Luogeng, is a national, academic, non-profit social organization voluntarily formed by relevant experts. The academic unit of science and technology workers who manage scientific research and education selects about 20 undergraduate student members each year. My invitation came following an excellent performance in the National Undergraduate Mathematical Modeling Contest.

Certificate, College Student Mathematical Modeling Association

2019-present

Recognized by the Ministry of Industry and Information Technology

National Honorary Certificate

The Mathematical Modeling Association of the Talent Exchange Center of the Ministry of Industry and Information Technology is approved by the Office of the Institutional Establishment Committee of the People's Republic of China, registered with the National Public Institution Registration Administration, and directly under the Ministry of Industry and Information Technology. This is an accredited professional body. Passing the assessment and demonstrating the ability to solve practical problems with excellent mathematical modeling was considered to be recognized in the high-level talent database of the Talent Exchange Center of the Ministry of Industry and Information Technology.

PUBLICATIONS

Journal Publications

- Haonan Wang. Research status and prospects of machine learning algorithm in big data analysis [J]. Journal of Network Computing and Applications, 2021, 6(1).
<https://www.clausiuspress.com/article/1212.html>
- Ruiyang Wang, Haonan Wang, Junfeng Sun, Mingjia Zhao, Meng Liu. Research on geometric figure classification algorithm based on Deep Learning [J]. Scientific Journal of Intelligent Systems Research, 2022, 6(1).
<http://www.sjir.org/download/sjir-4-6-335-340.pdf>
- Haonan Wang. "Research on E-commerce Customer Satisfaction Based on Two Type Fuzzy Sets,"
<https://pan.baidu.com/disk/pdfview?path=%2Fwww.paper.edu.cn%2FResearch%20on%20Ecommerce%20Customer%20Satisfaction%20Based%20on%20Two%20Type%20Fuzzy%20Sets.pdf&fsid=318302379438915&size=451188>
- Haonan Wang. "Research on triangle pattern recognition based on Fuzzy Mathematics,"
<https://pan.baidu.com/disk/pdfview?path=%2Fwww.paper.edu.cn%2FResearch%20on%20triangle%20pattern%20recognition%20based%20on%20Fuzzy%20Mathematics.pdf&fsid=788031712311982&size=412945>

SOFTWARE SYSTEM PATENT

- [1] **Haonan, Wang**, Mingjia, Zhao, Chang, Liu “Artificial intelligence robot programming interactive control system,” PRC Software Copyright Patent, No. 2022SR1053901.
- [2] **Haonan, Wang**, Junfeng, Sun, Xin, Yu “Image recognition processing operation platform,” PRC Software Copyright Patent, No. 2022SR1052419.
- [3] **Haonan, Wang**, Chang, Liu, Mingjia, Zhao, “Artificial Intelligence Community Security Equipment Monitoring System,” PRC Software Copyright Patent, No. 2022SR1052492.
- [4] **Haonan, Wang**, Meng, Liu, Mingjia, Zhao, “A network behavior analysis system based on machine learning,” PRC Software Copyright Patent, No. 2022SR1049807.
- [5] **Haonan, Wang**, Chi, Li, Meng, Liu, “Autonomous Driving Intelligent Dispatching Center Management System,” PRC Software Copyright Patent, No. 2022SR1052526.
- [6] **Haonan, Wang**, Ruiyang, Wang, Mingjia, Zhao, “Unmanned shortest path planning system,” PRC Software Copyright Patent, No. 2022SR0935020.
- [7] **Haonan, Wang**, Xin, Yu, Junfeng, Sun, “Data operation analysis and collection system based on machine learning,” PRC Software Copyright Patent, No. 2022SR1052428.
- [8] Jiawei, Zhang, Pengyu, Cai, **Haonan Wang**, Kai Lv, Qi Wei, “Staff check-in face recognition system,” PRC Software Copyright Patent, No. 2021SR0699354.
- [9] Ruoying, Huang, Yiqiang,Xia, Xia,Xu, **Haonan,Wang**,Mingjia,Zhao, “Motion detection system based on Artificial Intelligence” PRC Software Copyright Patent, No.2023R11L1294610
- [10] Ruoying, Huang, Xia,Xu, Yiqiang,Xia, **Haonan,Wang**,Mingjia,Zhao, “Computer mathematical test report generation system” PRC Software Copyright Patent, No.2023R11L1294478

COMPETITION AWARDS

1st Place, 12th MathorCup College Mathematical Modeling Challenge

2022

National-level award in China,

The mathematic modeling competition organized by the China Optimization Method and Operational Research Group, founded by Mr. Hua Luogeng, is among the most influential for Chinese undergraduate students. As the captain representing my team (LNTU), I proposed a new intelligent optimization algorithm for unmanned parking lots. My paper, "Exploration on Automatic Parking of Unmanned Vehicles Based on Multiple Optimization Algorithms," was acknowledged as the most outstanding paper in the competition.

1st Place, Liaoning Mathematical Modeling Contest

2022

Provincial-level award in China,

Sponsored by the Education Department of Liaoning Province, the competition is aimed at college students in Liaoning Province and is considered the top mathematical modeling competition in the province. I led our team in constructing the competition's top paper, "Offshore Oil Diffusion Law and Analysis Based on Multi-Optimization Algorithm Model."

1st Place, 7th Shuwei Mathematical Modeling Challenge for College Students

2022

National-level award in China,

This is a nationwide mathematical modeling competition for college students in China. As team captain, I used the optimization algorithm to solve COVID-related scheduling problems. The title of the presentation: "Research on the New Crown Epidemic Prevention and Control Strategy Based on Multiple Optimization Algorithms."

3rd Place, Liaoning Province "Shuo Ri Cup" College Student Computer Design

2022

Provincial-level award in China,

Put on by the Department of Education of Liaoning Province, this computer and data analysis competition invited college students nationwide. It is the highest-regarded computer design competition in Liaoning Province. As the captain, I led our team to 3rd Place in the direction of software development. The name of our paper: "CNN-based Geometric Classification and Recognition devDeveloped Software."

1st Place, LNTU Computer Design Competition

2022

School-level award,

Liaoning Computer Design Competition held by Liaoning University of Engineering and Technology.

3rd Place, Northeast Three Provinces Mathematical Modeling Competition

2022

Provincial-level award in China,

The high-level mathematical modeling competition is aimed at college students from Northeast China. It is known as the highest-level competition of its sort in Northeast China. Using my knowledge of machine learning to solve the practical problem of COVID-related resource isolation issues, I constructed the essay: "Isolation Resource Issues of New Coronary Pneumonia Infectious Diseases."

3rd Place, American Mathematical Contest in Modeling

2021

International award,

The Mathematical Contest in Modeling (MCM/ICM) is sponsored by the American Association for Mathematics and its Applications. It is the world's only international Mathematical Contest in Modeling and the most influential Mathematical Contest in Modeling. I led my team to develop a new drone forest fire relief method. The title of the work: "The UAV 'Ready to Kiss' the Fire."

3rd Place, 14th National Undergraduate Computer Design Competition

2021

National-level award in China,

China College Students Computer Design Competition (*The Contest*, or *4C*) is one of the earliest competitions for undergraduates in domestic universities in China. From 2008 to 2019, it ranked first in the list of China's key computer design competitions and is the preeminent competition in China. I led our team to participate in the national competition defense during the standard computer competition. The work revolved around data analysis and data visualization, and the theme is: "Analysis Report on New Digital Economic Models in the Background of "The Internet+ Era."

- 3rd Place, 11th Mathor Cup University Mathematical Modeling Challenge** 2021
National-level award in China,
 The mathematic modeling competition organized by the China Optimization Method and Operational Research Group, founded by Mr. Hua Luogeng, is among the most influential for Chinese undergraduate students. In the competition paper, I tried to use artificial neural network algorithms to explain the energy prediction of new chemical energy bodies. The title of the work: "Research on 3D Cluster Energy Prediction in the Field of Machine Learning."
- 2nd Place, National College Students "Hua Shu Cup" Mathematical Modeling** 2021
National-level award in China,
 This high-level mathematical modeling competition is sponsored by the Big Data and Mathematical Modeling Committee of the China Future Research Association for college students nationwide. In this competition, I tried to use the decision tree algorithm of machine learning and data mining to solve problems related to electric vehicles, precisely the issue of sales strategies. The final work was entitled: "Research on Multiple Sales Strategies of Electric Vehicle Target Customers."
- 1st Place, Liaoning Province "Shuo Ri Cup" College Student Computer Design** 2021
Provincial-level award in China,
 Put on by the Department of Education of Liaoning Province, this computer and data analysis competition invited college students nationwide. It is the highest-regarded computer design competition in Liaoning Province. As the captain, I led the team to construct our award-winning "Digital Economy Model Analysis Report."
- 1st Place, Liaoning Agricultural Economic Modeling Competition** 2021
Provincial-level award in China,
 This mathematical modeling competition is sponsored by the Liaoning Provincial Department of Education and is aimed at college students in the province tackling agricultural problems. In this competition, I used the time series prediction method to solve the problem of agriculture, rural areas, and farmers in the next 20 years. I also had constructive dialogue in the final defense. The title of the final work: "Prediction of China's Agricultural Development Based on the Impact of the Three Rural Issues."
- LNTU 2020-2021 Advanced Individual in Social Practice** 2020-21
School-level award,
 Sponsored by the Liaoning University of Engineering and Technology, the award confirms outstanding social service and symbolizes the significance of social practice and community service. As the team leader, I completed volunteer community services and lectures on love and protection of left-behind children across three provinces and five cities.
- 1st Place, Outstanding Scholarship of the Faculty of Science, LNTU** 2020-21
School-level award,
 The scholarship, awarded by Liaoning University of Engineering and Technology, recognizes students who have achieved impressive feats within their major. My most significant achievement was as the top performer in my major for two consecutive years.
- 1st Place, Career Planning Competition of the Faculty of Science, LNTU** 2020-21
School-level award,
 The competition, sponsored by Liaoning University of Engineering and Technology, preaches its plans and showcases its goals. My presentation was on the meaning of life.

Academic Achievement Award of the School of Science, LNTU

2020-21

School-level award,

This competition commends students who have achieved top-two performance within their major for consecutive years, as well as representing the highest honor in terms of overall quality and academic performance.

Outstanding Student Leader of the Faculty of Science, LNTU

2020-21

School-level award,

This distinction commends class cadres who have achieved good grades for consecutive years and students leaders of outstanding student organizations.

2nd Place, Liaoning Mathematical Modeling Contest

2020

Provincial-level award for China,

The mathematical modeling competition sponsored by the Liaoning Provincial Department of Education and aimed at college students across the province also served as a selection process for the national-level competition. I led my team in drafting the article: "Infectious Disease Cells in a Closed System" Dynamic Evolution Model of Automata."

3rd Place, Outstanding Scholarship of the Faculty of Science, LNTU

2019-20

School-level award,

This scholarship, awarded by Liaoning University of Engineering and Technology, recognizes outstanding students in the department.

PROFESSIONAL AFFILIATIONS

Beijing Qianfeng Internet Technology Co., Ltd. (Shenyang Branch), 2022.08.15-2022.09.15

- As an intern in the second echelon of the technology research and development department, I was mainly responsible for programming and testing, network security programming, and routine computer maintenance.
- Responsible for programming the connection between the system developed by the Python programming language and the database
- Performed Python command updates and server configuration.
- Responsible for testing the MySQL system's database update, configuration, and daily operation, using bugs to solve problems, and finding suitable machine learning algorithms to update the data analysis framework.
- Impressed by the array of professional functions already accessible and equally intrigued by how much there was still to learn about working in a professional tech environment.

COMPUTER SKILLS

Programming: Python, MATLAB, MySQL,

Applications: Microsoft Office, Adobe Audition, Visio, IDE, Jianying,

Platforms: Windows, PyCharm