

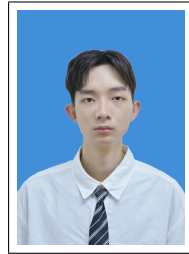
# Jiangshan He

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## EDUCATION

- Undergraduate: School of Computer Science, Wuhan University** Wuhan  
*Major: Artificial Intelligence* 2020.09 - Present
  - GPA:** 3.66/4.0
  - Math courses:** The optimization methods (99), Advanced Mathematics (95/90), Discrete Mathematics (96), Linear Algebra (90)
  - AI courses:** Machine Learning (93), Quantum Computing (93), Knowledge Engineering (90), Computer Vision (90)
  - Scholarship:** Outstanding Student Third-Class Scholarship(2021.12), Outstanding Student Second-Class Scholarship(2023.12)

## PROJECT & EXPERIENCE

- Mathematical Contest in Modeling, MCM** Wuhan  
*The main team members* 2022.02
  - Using time series models and constrained optimization knowledge from the course to solve the investment allocation problem across multiple assets.
  - Utilizing ARIMA for forecasting future asset values, alongside constrained optimization to select the optimal daily investment strategy, achieving the Meritorious Winner award (placing within the top 7.5%).
- MMM Video Browser Showdown** Online  
*The primary leader* 2022.09 - 2023.01
  - Competing against teams from the University of Applied Sciences in Germany, City University of Hong Kong, and others.
  - Tasks contain: KIS (Known-Item Search), AVS (Ad-hoc Video Search), and add A New Marine Video Dataset
  - Utilizing a multimodal pre-trained model to process multimodal inputs**, generating initial rankings, combining a self-designed quantum-inspired interactive algorithm, and developing an interactive system. QIVISE Used to verify frame timestamps.
  - publish a paper in MMM. Submitted a patent application as an inventor, which is currently under public disclosure. Also successfully obtained a software copyright.
- TRECVID Ad-hoc Search tasks,** Wuhan  
*The main contributors* 2023.01 - 2023.10
  - Representing the National Engineering Research Center for Multimedia Software. Competing against teams from Renmin University of China, Waseda University, and others.
  - Utilizing **multimodal models and Diffusion model** to generate multiple retrieval rankings, then employing fusion algorithms to enhance the ranking effectiveness.
  - The first position in both the automatic submission and relevance feedback tracks. Presenting as a representative to speak at the conference, sharing experiences.

## AWARDS

- Ranking first:** TRECVID Ad-hoc Search task 2023.07
- Best Newcomer:** MMM Video Browser Showdown 2023.01
- MMM paper:** 《QIVISE: A Quantum-Inspired Interactive Video Search Engine in VBS2023》 2023.01
- Meritorious Winner(top 7.5%):** Mathematical Contest In Modeling 2022.05
- University-level:** College Students Innovative Entrepreneurial Training Plan Program, 2023.04
- First Prize(Province- Level):** College Student Mathematics Competition(Non-Mathematics Type A), 2023.01

## CAMPUS EXPERIENCES

- Committee Member** Student Cultural and Arts Center Visual Creative Studio Photography Group 2021 - 2023
- Teaching Assistant** 《Quantum Computing》 2022-2023

## LANGUAGE & SKILLS

- Language:** Mandarin(Native), English(CET-6:514)
- Programming Languages and Frameworks:** C/C++, Python, Pytorch
- Skills:** Familiar with machine learning, deep learning, pattern recognition and data mining; Familiar with data structures and algorithms; Familiar with multimedia technology; use ChatGPT and New Bing to assist in learning.
- Hobbies:** Scenic/Film Photography, Poetry, Movies