Jiangshan He

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EDUCATION

- **Undergraduate: School of Computer Science, Wuhan University**   Wuhan
  Major: Artificial Intelligence   *2020.09 - Present*
  - **GPA:** 3.64/4.0
  - **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 Browswer 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