

Kairui Wang

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Education

Beijing 101 Middle School , IBDP curriculum	Sept 2022 – May 2025
• IB: Bilingual Diploma, 42/45 & TOEFL: 114 & SAT: 1550	
University of Hong Kong , BS in Quantative Finance	Sept 2025 – May 2029
• Coursework: Applied Mathematics, Machine Learning, Microeconomics, Macroeconomics, Quantitative Finance	

Experience

Program Intern , BeiDou Navigation and Digital Twin Technologies, Inc. Beijing	July 2024 – Aug 2024
• launched a Digital Twin ecosystem management system	
• Testing 10k+ lines of code, sold 900+ units	
• Customized Artificial Floating Islands for 5 campus	
Research Assistance , Tsinghua University Mathematics Department; Institute of Computing Technology, Chinese Academy of Science, Beijing	May 2023 – NOV 2023
• Research on practical uses of quantum computing and quantum neural network	
• Testing quantum neural network performance on classical computing task	
• Research on RSA cryptography and the use of quantum computation tech on RSA decryption.	

Publications

MNIST Handwritten Digit Classification with Quantum Neural Network(IEEE)	Nov 2024
Huang, B., Wang, K., Gao, B. MNIST Handwritten Digit Classification with Quantum Neural Network.	
Using quantum image representation algorithms as encoders for quantum neural networks (QNN), explored the strengths and weaknesses of different ansatz and representations in terms of image classification.	
Modeling benefits from the resumption of work and production in the firm during the COVID-19	May 2023
Kairui Wang	
Explored strategies for balancing employee health with profitability during the COVID-19 pandemic using mathematical modeling. Achieved a 10% profit increase by implementing innovative recovery plans.	

Projects

EMPIC (Economic/Mathematics/Physics/Computer Science) STEM Club Leader	2023.08 - Present
• Founded a 150-member interdisciplinary club, organized 25 seminars on Bitcoin, game theory, quantum physics, etc., and resulted in 5 research papers.	
• 150+ members, 25 seminars, 5 research papers, and 1000+ article page views	
Intelligent Blackboard Innovation (Launched)	2023.04 - Present
• Designed and developed an automatic handwriting recognition blackboard eraser, enhancing teaching efficiency and reducing health risks. Led the team to analyze the blackboard market and predict future market growth trends.	
• Launched in 3 schools with 1k+ users	
Bashanzhong Accompanying Reading Non-profit Organization Leader & Editor	2023.04 - Present
• Organized a two-year online English reading tutoring program, reaching about 3 schools with 300 participants in rural areas.	
• Reached 600 students over two years/Arranged 40+ online reading sessions	
• National Approval and Sponsors Organization	

**Research on Improved RSA Cryptography followed by Tsinghua University
Mathematic Department Professor (Published in IJHSR)**

2023.09 - 2024.07

- Improved RSA cryptography system by analyzing 50 papers, enhanced security, and reduced decryption time;
- completed course and submitted on IJHSR.

Awards

2023 S.T. Yau High School Science Bronze Award (Top 3 & Top1%)

2023, Beijing

- Awarded for exceptional performance in science research (Top 1%)

International Math Modeling Competition (IMMC) Outstanding Prize (Top 1%)

2024, Hong Kong

- Awarded for exceptional performance in science research (Top 1%)

Technologies

Languages: Chinese, English

Technologies: HTML, Java, SQL, JavaScript, VUE, AE,PS