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# Education

**Xinjiang University** *Urumqi, Xinjiang*

Bachelor of Science Degree, Mathematics and Applied Mathematics. 3.21/5 *2023–Present*

Relevant Coursework: Mathematical Analysis, Analytic Geometry, Partial Differential Equations, Functional Analysis, etc.

**Joint Program: Tsinghua University, Tsien Excellence in Engineering Program - X-Institute** *Shenzhen, Guangdong*

Enhanced Student Research Training, Open Research for Innovation Challenges, etc *2024–Present*

**Zhounan High School** *Changsha, Hunan*

Zhounan Star (the highest honor of the school), Shizhao Zhou Subject Competition Award, Peking University Summer Camp Participant, Five Excellences Model Student, Star of Excellence, AMC 12 Second Place *2020-2023*

# Research Experience

**Chinese Academy of Sciences Innovation Practice Training Program** *(Principal Investigator)* *2024.11-2025.9*

• Led research project on extracting and analyzing global heatwave adaptation factors using multimodal BERT models  
• Integrated text, image, and structured data analysis to identify key factors affecting heatwave adaptation  
• Developed theoretical and data support for global heatwave response strategies under Prof. Ge Yong's guidance

**Provincial Undergraduate Innovation Training Program** *(Principal Investigator) 2024.3-2025.6*• Conducted research on generating circularity of n-fold Cartesian product graphs of complete graphs  
• Extended existing research beyond 2-3 vertex complete graphs to analyze graphs with 4+ vertices  
• Collaborated with Associate Prof. Eminjan Sabir on advanced graph theory concepts

**Tsinghua University Tsien Excellence in Engineering Program ESRT Project** *(Principal Investigator)**2024.8~2025.1*• Developed innovative approach converting protein sequences into musical encodings  
• Achieved 91.04% classification accuracy using ML models on 2000+ protein mappings  
• Established correlation between musical harmony indices and protein functionality

# Professional Experience

**Institute of Software, Chinese Academy of Sciences - Huawei Mindspore** (*Research Intern) 2024.9 – 2025.3*• Implemented VGG19-based Pollock style transfer for fractal and turbulent feature extraction  
• Applied machine learning and AI techniques for artistic style analysis

# Selected Publications

•Luo, Z., Wang, X., Wang, Y., Zhang, H., & Li, Z. (2024). A Personalized MOOC Learning Group and Course Recommen-dation Method Based on Graph Neural Network and Social Network Analysis. *Journal Of Computing In Higher Education* *(under review, co-first author)*

• Wang, Y., Wang, Xu., Jiazhuo, Pan. (2024). Fractal and Turbulent Feature Extraction and NFT Label Generation for Pollock Style Migration Paintings Based on VGG19. *Computer Vision and lmage Understanding* *(under review, first author)*

• Wang, X., Xu, L., Wang, Y., Dong, Y., Li, X., Deng, J., & He, R. (2024). Octopus Inspired Optimization Algorithm: Multi-Level Structures and Parallel Computing Strategies.*Machine Intelligence Research**(under review, Corresponding author)*

# Awards and Honors

• National 17th Place, Alibaba Cloud University Student Competition 2024

• National Third Prize, 14th APMCM Asia-Pacific Mathematical Modeling Competition 2024

• 7th Place, Xinjiang “Tianshan Network Cup” Cybersecurity Skills Competition 2023

• 15th Place, National Amateur Go Chess King Championship 2024

# Skills & Interests

**Technical Skills:** Python, C/C++, MATLAB, HTML, JavaScript, CSS  
**Languages:** Chinese (Native), English (Professional)  
**Research Areas:** Machine Learning, Bioinformatics Analysis, Mathematical Modeling, Graph Neural Networks  
**Interests:** Go (Weiqi), Photography, Cycling, Programming, Fishing