Jingwen Yang (Anita)

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Education

The Hong Kong Polytechnic University *Sept 2023 – June 2027 (expected)*

BSc (HONS) DATA SCIENCE & ANALYTICS, Minor in Computer Science

- **WGPA**: 3.80 / 4.30
- **Coursework:** Linear Algebra(A+), Data Analytics & Visualization(A+), Multivariable Calculus(A), Statistical Inference(A), Data Structure(A), Fundamentals of AI & Data Science(A), Probability & Distributions(A), Database Systems(A-)...

Stanford University (*Summer Exchange*) *June 2024 – Aug 2024*

- **Coursework:** Machine Learning, Programming Methodology

Research Experience

24/25 Undergraduate Research and Innovation Scheme (URIS) *Sept 2024 – Aug 2026 (expected)*

The Hong Kong Polytechnic University, Department of Computing

- **Project**: "Physics-Informed Diffusion Model in 3D Molecule Generation"
- **Focus & Goal**: Integrating physical/chemical properties into a latent diffusion model to generate stable 3D molecular structures. Enhancing molecule quality and stability for potential applications in drug discovery and materials science

Research Collaboration on Crystal Tensor Prediction *Sept 2024 – Ongoing*

The Hong Kong Polytechnic University, Department of Computing

- **Project**: "FAST CRYSTAL TENSOR PROPERTY PREDICTION: A General O(3)-Equivariant Framework Based on Polar Decomposition"
- **Focus & Goal**: Develop an O(3)-equivariant framework for predicting tensor properties of crystalline materials. Use a novel rotation and reflection (R&R) module to reduce computational overhead while maintaining equivariance.
- **Contributions**: Supported to visualize comprehensive workflows for documentation and presentation, assisted to appendix writing by refining technical explanations, and participated in coding-related tasks for follow-up experiments

Projects

Banquet Management System

Building a database-driven system to manage banquet operations for attendees and administrators

- **Contributions**: Designed and implemented the system's functionality, debugged and tested extensively, created test datasets, and authored the user guideline and report samples.

Exploring Spam Classification Models Through Comprehensive Visual Analysis

A comparative study of four supervised machine learning models for spam email detection

- **Contributions**: Handled all coding tasks, performed data analysis and visualization, compared models, and prepared project documentation and presentations using Python, scikit-learn, matplotlib...

Scholarships & Activities

- **Hall Academic Scholarship**: Awarded to the top 3 students in GPA from the academic year *June 2024*
- **Research Scholarship**: Undergraduate Research and Innovation Scheme Scholarship *June 2024*
- **Social Activity**: Facilitated STEM education for children with learning difficulties in local schools, promoting scientific literacy and overcoming educational challenges *Jan 2025 – June 2025 (expected)*

Technologies & Interests

Languages: Mandarin(Native) | English(advanced) | Cantonese(Basic) | TOEFL(99) | GRE(150+170+3.5)

Technologies: Python (Proficient), C++, SQL, R | Latex, Microsoft Office, Vesta, Photoshop