

Yizhen Wang

Physics, Innovation and Leadership

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Education *University of Cambridge - MPhil in Data Intensive Science* Oct. 2023 - Now
Theory: Bayesian statistics, Wilks' theorem, p-value, Z-score, chi-squared test, and Gaussian mixture models.
Data Science: Random forests, AdaBoost, hierarchical clustering, fuzzy clustering
Research Computing: C++ with MPI, scientific computing in Python, parallel computing under Linux.

University College London - BSc Physics Oct. 2020 - Jul. 2023
First Class Honors Transcript available.
83.26% in Theory of Dynamical Systems (Third year)
83.11% in Quantum Mechanics (Third year)
89.35% in Mathematics for Physics and Astronomy (Second year)

- Lab: Self-motivated exploration with creative thoughts beyond lab script. Scrupulous lab book recording including procedure with my adjustments, raw results and data analysis.
- Python Computing: Statistical process on experiment data and analyze the trend and error with hypothesis testing, presented by graphs; Use Euler method and Runge-Kutta method to simulate the motion of physical objects under differential equations.

Shanghai Qibao Dwight High School Sep. 2017 - Jun. 2020
International Baccalaureate Diploma Programme 40/45
Higher Level: English B; Physics; Mathematics;
Standard Level: Chinese Language and Literature; Economics; Chemistry

Coursera Machine Learning Aug. 2020 - Dec. 2020
www.coursera.org/account/accomplishments/verify/BA6JE6MN7T35
Understand basic concepts for gradient descent, support vector machine, neural networks (forward propagation and backpropagation).

Internship *Summer Project in Positronium Group at University College London* Jul. 2023 - Aug. 2023
martinwang2002.com/p/2023-ps-summer-project/

- Get acquainted with the equipment used in the continuous beam and analyze data obtained from the position-sensitive detector using Bayesian.
- Investigate the Separated Oscillatory Fields (SOF) technique and perform simulations on positronium.

ChangeMakers for Practical Physics and Computing 2 Jun. 2022 - Jul. 2021
Revise code for grading and change to Google style. Make error message more useful that helps students eliminate errors and learn from mistakes.

System Engineer at Alpha Cen Jul. 2021 - Sep. 2021
Non-Disclosure Agreement signed. Conducting optical experiments for software defined optical chip at a startup high-tech company.

Skills Chinese driving license (manual car).
Programming Language: Python (numpy / pandas / scipy / matplotlib / seaborn), Go (Fiber), Javascript (React / TypeScript).