# HAOCHEN GU

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#### **EDUCATION**

Imperial College London, BS Mathematics with Statistics

2023 - 2026

• Year 1: 78.15%

High School Affiliated to Nanjing Normal University, International Baccalaureate DP

2020 - 2023

• 43/45 Global Top 3%

#### **SKILLS**

Python, LaTeX (proficient), R

### **EXPERIENCES**

University of Science and Technology - Part-time Research Assistant

2024.11.01 - present

• Currently working on the project of machine learning for polymer structure discovery.

## China Securities - Investment Banking Department

2024.07.01 - 2024.08.31

- Assist in preparing the bidding documents and prospectus for the bond-issuing company.
- Assist in organizing the financial data of the bond-issuing company.

#### RESEARCH

Analysis of the distribution of combined random variables using Fourier transform and characteristics functions: For my high school extended essay, I employed Fourier transforms to create a mathematical model assessing the risk-return relationship of a portfolio comprising Apple and Johnson & Johnson stocks. This effort was recognized with an 'A' grade, the highest evaluation from the International Baccalaureate Organization (IBO).

Spatio-Temporal Analysis of Drug Prime Nearby, Using Kernel Density Estimation: Based on kernel density estimation, a spatiotemporal point process model of drug crime distribution within the corresponding range was constructed, successfully identifying the peak periods and concentrated areas of drug crime in London.

#### AWARDS

• WorldQuant Challenge

GOLD LEVEL

## **OTHERS**

Language: Mandarin - Mother Tongue

English - Academic Language

### **Online Courses:**

- Coursera Stanford University & DeepLearning.AI Machine Learning Specialization
- Udemy Data Science in Python: Data Prep & EDA

## **Personal Blog:**

guhaochen.uk