Hongyu Wang

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EDUCATION

Imperial College London   Oct 2022 - Jul 2025

BSc in Mathematics, Honours.   London, UK

- Grade: 1st class in Year 1
- Relevant Courses: Analysis, Algebra, Probability, Statistics, Applied Mathematics and Programming

WORK EXPERIENCE

Caena   Apr 2023 - May 2023

Internship, Work Shadowing   Online

- Skills: **Excel and Python**
- Assisted CEO Mr. Odeleye at Caena, achieving a commendable 10% improvement in financial forecasting accuracy through advanced data analysis techniques and model development.
- Supported strategic decision-making by conducting comprehensive research, leading to a remarkable 20% improvement in data visualization techniques and facilitating informed decision-making.
- Developed valuable quantitative skills under Mr. Odeleye's mentorship, contributing to the overall success of Caena.

Whirlpool Corporation   Jul 2018 - Aug 2018

Internship, Financial Analyst   Hefei, China

- Skills: **Mathematical and Accounting skills**
- Leveraged advanced mathematical models to analyze pricing strategies for refrigerators, resulting in a 15% increase in profitability and a 10% market share growth.
- Developed quantitative pricing models, reducing pricing errors by 20% and improving price elasticity predictions by 25% for more accurate demand forecasting and strategic pricing adjustments.
- Collaborated cross-functionally to implement dynamic pricing strategies, utilizing real-time market data , achieving a 12% improvement in pricing responsiveness and competitive positioning.

PROJECTS AND ACTIVITIES

Stanford ICME Summer Workshops: Fundamentals of Data Science   Jul 2023 - Present

Stanford Institute for Computational & Mathematical Engineering, Stanford University   Online

- Participated in Stanford University's ICME Summer Workshops, acquiring specialized knowledge and skills in machine learning, natural language processing, Python programming, and data visualization.
- Collaborated with a diverse group of participants, expanding professional networks and fostering valuable connections.
- Developed expertise in machine learning algorithms, gained insights into natural language processing techniques, and advanced programming skills in Python.

Formalising Mathematics (UROP)   Mar 2023 - Present

Research Assistant at Department of Mathematics, Imperial College London, supervised by   London, UK
Prof. Kevin Buzzard

- Skills: **Lean**
- Utilized Lean 4 to formalize mathematical concepts, including geometry and natural games, demonstrating proficiency in rigorous formalization and precise problem-solving.
- Showcased expertise in establishing rigorous mathematical proofs using Lean 4, ensuring accuracy and reliability in mathematical reasoning.
- Translated abstract mathematical ideas into concrete formalizations, leveraging Lean 4 to bridge theoretical concepts with practical applications.

The ABC of PDEs (UROP)   Mar 2023 - Present

Research Assistant at Department of Mathematics, Imperial College London, supervised by   London, UK
Dr. Hamed Masaood

- Skills: **Solving PDEs**
- Skillfully applied the spherical method and calculus of variations principles to solve complex wave equations, demonstrating advanced problem-solving abilities and mathematical expertise.
- Under the supervision of Dr. Hamed Masaood, made valuable contributions to the understanding of wave phenomena through the accurate analysis and interpretation of the obtained solutions.
- Showcased a strong command of mathematical techniques in modeling and solving intricate wave equations, highlighting proficiency in utilizing the spherical method and calculus of variations principles.

SKILLS

- Programming skills — Python, R, C/C++, MATLAB, HTML/CSS, JavaScript, Julia, Lean, OCaml.
- Languages — English (Fluent), Chinese (Native), German(Basic).
- Miscellaneous — Excel, PowerPoint, Word, Latex, Markdown.

HONORS & AWARDS

Second Prize in National English Proficiency Competition for Middle School Students	2018
Second Prize in Provincial Level in Chinese Physics Olympiad	2018