

## EDUCATION

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- University of Pennsylvania** **Philadelphia, PA**  
*M.S.E Computational Engineering* 08/2025 – 05/2027  
• GPA: 3.90/4.0
- University of California, Berkeley** **Berkeley, CA**  
*Visiting Scholar – Computational Engineering* 09/2023 – 06/2024  
• GPA: 3.912/4.0  
• Awarded the merit-based [Turing Scheme scholarship](#) to study abroad, covering half my tuition
- King's College London** **London, UK**  
*BSc Mathematics with Finance* 09/2021 – 06/2025  
• Grade: First Class Honors, with commendations from the mathematics department's head for high achievement in all years  
• Thesis: *Simulation Study of Active Particle Systems* – [hosted here](#)

## EXPERIENCE

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- Penn Engineering** **Philadelphia, PA**  
*Teaching Assistant – Machine Learning* 01/2026 – Present  
• Teaching a section of 23 students for CIS 5200, the flagship ML Theory course at Penn  
• Making video walkthroughs of problem sheet solutions – [hosted here](#)
- King's College London** **London, UK**  
*Research Fellow* 06/2025 – 07/2025  
• Awarded the [King's Undergraduate Research Fellowship](#) to research fluid dynamics on super computers
- Count Energy Trading** **Zug, Switzerland**  
*Quantitative Researcher and Developer* 07/2024 – 04/2025  
• Implemented and deployed a profitable spark-spread latency trading strategy  
• Developed two predictive models for German and French power load forecasts and cross-border flows  
• Engineered an end-to-end SQL Server infrastructure for power data, with automated ETL pipelines and real-time data pulls  
• Built automated dashboards and messaging bots (Telegram) to stream live market updates and strategy-specific indicators
- Lawrence Berkeley National Laboratory** **Berkeley, CA**  
*Research Assistant* 05/2024 – 07/2024  
• Coded a 2D Gaussian Process Regression model to predict lithium-ion battery durability using our gpCAM python package  
• Structured our cycling space using parametric sine waves to advance beyond cycling assumptions in existing literature
- UC Berkeley Department of Mathematics** **Berkeley, CA**  
*Research Assistant* 01/2024 – 05/2024  
• Collaborated with a Ph.D. mentor to research the application of determinantal point processes in finance, leveraging their repulsive subset selection properties to sample assets with negatively correlated returns and construct optimal portfolios  
• Presented research titled *Determinantal Point Processes in Portfolio Optimization* to a panel; it is available on my [YouTube page](#)

## OTHER PROJECTS

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- Building AI agents for all calendar and email-related tasks, [demo 'ed here](#)
- Built a [binomial tree options pricing engine](#) supporting European/American, barrier (in/out, up/down)/vanilla calls/puts
- Built a tool to help compute and settle at-home poker games with friends - [hosted here](#)

## OTHER HONORS & AWARDS

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- Fellow of the [Widjaja Engineering Entrepreneurship Fellowship Program](#) at Penn Engineering 11/2025
- Ranked 13th at the [AlgoTrade Zagreb](#) Hackathon 06/2025
- Best intern of the summer at [Bankmed](#) with commendations from the executive general manager and CEO 08/2022
- Won the *Most Exemplary Character and Positive Impact Award* at high school graduation 06/2021
- Selected for the international *Concours Générale de Mathématiques* organized by the French Ministry of Education 03/2021

## SKILLS & OTHER HOBBIES

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- Spoken Languages (5): Fluent: English, French and Arabic // Working proficiency: German, and Spanish
- Programming Languages (6): Advanced: Python, Julia, Java, SQL // Good: R // Elementary: C/C++, Scheme (LISP)
- Mathematics tutoring for 5 high-schoolers in London, all of them improving and achieving higher results
- Certified Deep Waters Scuba Diver, Boat Master, First-Aid, Basic Life Support and Lifeguard by the American Red Cross