

Jiatong Gao

jgao7@uw.edu | +1 2068868895 | Seattle, WA

EDUCATION

University of Washington

Seattle, WA

Bachelor of Science in Mathematics, Minor: Applied Mathematics

Expected Graduation: Jun 2025

- **GPA:** 3.61/4.00 ; **Major GPA:** 3.51/4.00
- **Related Courses:** Multivariable Calculus, Linear Algebra, Probability, Real and Complex Analysis, Point-Set Topology, Modern Algebra, Differential Geometry, Partial Differential Equation, Machine Learning.

PROJECT EXPERIENCE

Experimental Lean Lab(XLL) - WXML

Sept 2024 - Present

Researcher; Advisor: Prof. Jarod Alper

Seattle, WA

- Served as a Research Assistant in a Lean programming language project, a proof system for mathematical proofs.
- Use Lean 4 Programming to write some proofs of commutative algebra

Numerical Solution on Non-Linear Schrödinger Equation on the $\mathbf{R} \times \mathbf{T}^2$

Jun 2023-Aug 2024

Researcher; Advisor: Prof. Xueying Yu

Seattle, WA

- Leverage Physical-Informed Neural Network (PINN) to solve the H^s norm of solutions to the Nonlinear Schrödinger Equation (NLS) within a three-dimensional domain in order to capture complex nonlinear relationships.
- Establish and train a PINN model in Python, including model definition, training pipeline, and loss function setup.
- Observe periodic results from the model; further computation by supercomputer is needed to ensure consistency.

Comparative Analysis of Asset Pricing Models

March 2024

Member

Seattle, WA

- Analyzed the effectiveness of different asset pricing models in predicting stock prices, focusing on the CAPM, Three Factor Model, and Five Factor Model developed by Fama and French.
- Implemented diverse portfolio strategies incorporating factors such as company size, book-to-market ratio, profitability, and investment across a range of market conditions and portfolio compositions.
- Identified superior performance of the Five Factor Model over the Three Factor Model and CAPM across diverse portfolios, particularly those featuring micro-cap stocks and low-profitability firms.

Rotman International Trading Competition

February 2024

Member

Toronto, ON

- Developed Python scripts for various cases: Created and optimized algorithmic trading strategies for the Algorithmic Trading Case, ETF Case, and Commodities Case
- Utilized mathematical and statistical models (e.g., Linear Regression, Random Forest) in order to identify favorable trading patterns and signals.
- Enhanced the model's predictive capability by extracting and creating new feature variables, including technical indicators, volatility, and trading volume.

WORK EXPERIENCE

University of Washington

Jan 2024 - Present

Part-time CLUE Math Tutor

Seattle, WA

- Provide tutoring sessions regarding Calculus, Linear Algebra and proof twice a week for undergraduate students.
- Help students do the exam review before the midterm and final.

SKILLS

Language: Mandarin Chinese (native), English (Professional Proficiency)

Skills: Python, R studio, SQL, Microsoft Office, MATLAB, Java, machine learning tools (Pytorch, TensorFlow)