# Ziyu Li

*CV*

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## Education

2023–2027 **MS in mathematics**, *Tongji Univeristy(985 Project)*, Shanghai, China

2019–2023 **BA in Translation**, *University of Electronic Science and Technology of China(985 Project)*, Chengdu, China

2019–2023 **BE in Computer Science**, *University of Electronic Science and Technology of China(985 Project)*, Chengdu, China

## Master thesis

title *An optimization algorithm on Discrete Fourier Transformation*

supervisors Xiping Zhang

## Research Intern Experience

Apr 2025–present **Quantitative Researcher Intern**, *Zhanhong Investment(AUM over 10Billion)*, Shanghai

Detailed achievements:

- From Level-2 futures data, using machine learning algotirhm(Ridge, Lasso, Linear Regression, Logistic Regression,etc) to derive factors to predict one to two hours' return which have IC $> 0.1$.
- From Level-2 futures data, decomposed trade prices and trade sizes; developed a high-performance backtesting system with a matching engine in C++, simulating expected execution/cancellation times — the average estimated order traded time error vs live trading is about 5%.
- Constructed time-series price-volume factors from Level-2 slices (prediction horizon 60 min, rebalancing every 30 s); achieved stable returns under 1 bp transaction cost, with IC>0.01 across 40 major instruments.
- Developed DolphinDB engineering to implement streaming intraday operators (sector indices, instrument indices, and other indicators), providing derived-data support for low-latency trading.

Oct 2024–Apr 2025 **Quantitative Researcher Intern**, *Shanghai Tongliang Intelligent Technology Co., Ltd.*, Shanghai

Detailed achievements:

- Developed low-frequency CTA strategies and managed a futures account (AUM CNY 2.2M); the portfolio achieved 8% equity growth within three months of live deployment.
- Built cross-sectional long-short factor strategies; with initial capital of CNY 2M and a constant position of CNY 1.6M, a 10-year backtest yielded 103% simple annualized return and 18% maximum drawdown.

## Course Project Experience

Oct 2025–present **UC Berkeley**, *CS189*, Introduction to Machine Leaerning

Detailed achievements:

- Studied classic machine learning algorithms and deep learning models (e.g., K-Means, Linear Regression, Logistic Regression, CNN, ResNet, Transformer) and implemented them in Python.
- Learned pretraining and fine-tuning of LLMs. For single-label multi-class tasks, experimented with the C-Eval dataset and parameter fine-tuning strategies using the pretrained Qwen2-0.5B model; performed both full fine-tuning and frozen fine-tuning, achieving about 20% improvement over baseline on the course test set.

May 2025–Aug 2025 **Stanford**, *CS144*, Introduction to Computer Networking

Detailed achievements:

- Implemented a TCP/IP network stack in C++: incrementally developed a reliable byte stream, out-of-order reassembly buffer, TCP receive stack, TCP send stack, and network interface.
- Verified functionality with unit tests and interoperability experiments; improved buffer management and reliability.

Jul 2025–Oct 2025 **UC Berkeley**, *CS61C*, Great Ideas in Computer Architecture (Machine Structures)

Detailed achievements:

- Gained a deep understanding of low-level computer implementation and system-level programming, including data representation, RISC-V assembly, logic circuits, CPU datapath and control logic, caching, and concurrency in C.
- Implemented a CPU in Logisim that supports decoding various RISC-V instructions and performs operations through control logic and datapath.

Jul 2025–Oct 2025 **Stanford**, *CS106L*, Standard C++ Programming

Detailed achievements:

- Intro to modern C++ engineering: mastered STL data structures, classes, streams, template classes and functions, operator overloading, and move semantics.

## Languages

Mandarin Mother tongue

English Fluent *Test For English Majors Band 8 passed*

## Programming Skills

Languages and Packages Python, Cpp, Pandas, Numpy, Polars, Pytorch

DataBase MySQL, Clickhouse, DolphinDB

OS Linux

## Interests

Texas Hold'em Poker

League of Legends

Crypto Trading