# SHENGBO LANG

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## EDUCATION BACKGROUND

**NEW YORK UNIVERSITY- The Courant Institute of Mathematical Sciences** New York, NY
**MS in Mathematics in Finance** Sep 2021 – Dec 2022

- ***Coursework:*** options pricing, volatility models, Black-Scholes formula and Greeks, stochastic calculus, risk and portfolio management, market microstructure

**UNIVERSITY OF NOTTINGHAM** Nottingham, UK
**BSc (Honors) Mathematics with Applied Mathematics** Sep 2017 – Jun 2021

- ***Coursework:*** probability, stochastic processes, time series analysis, numerical analysis
- ***Awards***: School Achievement Prize (top 1% in the class)

## WORK EXPERIENCE

**HYPHEN - SOVEREIGN WEALTH FUND** New York, NY
***Macro Quantitative Research Consultant*** (May 2022 – Oct 2022)

- Built Dynamic Factor Model on US recession forecasting (Pseudo R-squared approx. 0.85 in 30 year in-sample backtest); constructed factors based on economic activities and financial-market indicators; developed economic interpretations for the model
- Analyzed the lead-lag relationships over 100 global asset returns and economic indicators data; Create advanced visualization (matplotlib) and evaluated correlations for alpha potential
- Forecasted CPI and GDP using multiple regression models on asset and macro data
- Tested 60 technical indicators on industrial and national total returns (MATLAB-Financial toolbox)

**ZHEJIANG VENTURE CAPITAL GROUP CO., LTD** Hangzhou, China
***Research Analyst, Investment Department*** (Jun 2021 – Aug 2021)

- Conducted financial, statistical and industry analyses (e.g., linear regression, interval estimation) on companies and industries to support team's investments
- Performs due diligence on various companies via conference calls and on-site due diligence trips

## RESEARCH PROJECTS

**NEW YORK UNIVERSITY** New York, NY
***Portfolio Construction using Graph Sampling*** (Python)

- Applied PCA to stock features and constructed graphs based on the outcome; used graph sampling methods for stock selections; conducted backtest (results: 2% Tracking Error with S&P 500 index over 2017-2022)

***Energy Trading Strategies*** (Python)

- Developed Carry and Momentum strategies to crude oil and petroleum futures
- Back-tested rolling 1M futures cumulative returns with equity line (results: 0.7 Sharpe Ratio and 26% annualized return over 1993-2020)

**UNIVERSITY OF NOTTINGHAM** Nottingham, UK
***Time Series Analysis and Forecasting of Sales Data*** (R)

- Pre-processed data sets, visualized their characteristics (e.g., trends, stationarity, seasonality)
- Identified suitable models; forecasted future values based on fitted models

## TECHNICAL SKILLS

***Programming Languages:*** Python, Tableau, Sql, R, MATLAB, Java