Tianyao Deng

Chapel Hill, NC | https://tianyaodeng.github.io/web | tdeng@unc.edu

Education

University of North Carolina at Chapel Hill Aug 2020 - May 2026 (Expected)

Ph.D. in Economics | Focus: Financial Econometrics, Time Series, Volatility, Correlation

University of California, Berkeley Aug 2017 - May 2019

B.A. in Economics | GPA: 3.778/4.0 (*with Distinction, top 10%*)

Santa Monica College Aug 2015 - May 2017

Transfer program | GPA: 4.0/4.0

Experience

University of North Carolina at Chapel Hill Aug 2020 - present

Teaching Assistant | Econometrics; Microeconomics

Illinois State University Aug 2019 - May 2020

Research Assistant | Economics

Research Projects

- *Intraday Dynamics of Market Correlation and Impact of Macroeconomic Announcements (Job Market Paper)*
  I propose a novel quadrant-based correlation measure for stock price co-movement. I apply the new method to ultra-high frequency financial data to examine intraday dynamics of stock price co-movement, including pre-market and post-close trading sessions. I analyze how macroeconomic announcements affect the dynamics of stock price co-movement.

- *A Score-Driven Model for Market Correlation (work in progress)*
  I design and implement a dynamic score-driven model to study intraday market correlation.

- *Intraday Price Discovery of Bitcoin between Binance U.S. and Coinbase (2023)*
  I apply cointegration-based price discovery models to measure exchange level impact (Binance U.S. vs. Coinbase) on the efficient price of Bitcoin.

Skills

Programming & Tools: Python, R, SQL, Linux, LaTeX, Excel, PowerPoint, Word

Analytical Skills: time series analysis, forecasting, econometrics, statistical modeling, quantitative modeling, high frequency data analysis, financial economics, cointegration, PCA

Finance Applications: volatility modeling, correlation modeling, systematic risk, derivative pricing, portfolio analysis, price discovery

Behavioral Skills: teamwork, collaboration, communication, presentation, time management, adaptability

Languages: Chinese (Mandarin and Cantonese), English

References available upon request.