Tianyao Deng

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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

- *Systemic correlation: estimation and intraday variation (working paper)*
  I propose a novel quadrant-based correlation measure for stock price comovement. I apply the new method to ultra-high frequency financial data to study intraday dynamics of stock price comovement, including pre-market and post-close trading sessions. I also study how macroeconomic announcements affect the dynamics of stock price comovement.

- *A score driven model for systemic correlation (work in progress)*
  I designed and implemented a dynamic score driven model to study intraday market correlations.

- *Intraday price discovery of Bitcoin between Binance and Coinbase (2023)*
  I applied cointegration-based price discovery models to measure exchange level impact (Binance 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.