

# YUQIAN (TRUDY) LI

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## EDUCATION

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- Expected 12/24 **New York University, Courant Institute of Mathematical Sciences** New York, NY  
**M.S. in Mathematics in Finance**
- **Coursework:** stochastic calculus, dynamic asset pricing, machine learning, risk & portfolio management, financial securities & markets, interest rate & FX models, market microstructure
- 09/19 - 06/23 **Nankai University** Tianjin, China  
**B.S. in Mathematics and Applied Mathematics, Concentration: Mathematical Finance**
- **Coursework:** mathematical analysis, advanced algebra, probability, statistics, ODE, operations research, data structure & algorithms, financial engineering, actuarial science, investments
  - **Honors & Fellowships:** Graduate with Honors (top 3%), 5 fellowships in 3 years (top 5%)

## EXPERIENCE

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- 09/23 - Present **NYU Courant** New York, NY  
**Teaching Assistant**
- Support *Math for Economics II* and *Intro to Math Modeling* courses; lead 2 recitation sessions weekly; hold office hours; proctor exams; grade papers for 100+ students
- 03/23 - 05/23 **Cinda Securities** (Asset management firm with \$10B AUM) Beijing, China  
**Quantitative Analyst Intern (Python, MATLAB)**
- Investigated trends of 680+ convertible bonds from 2017 to 2022; weighted their implied volatility (IV) to monitor market IV; updated it daily for department's decision-making
  - Drew and updated IV surface of SSE 50 ETF options daily; designed timing strategies based on volatility risk premium, in collaboration with managers
- 01/22 - 03/22 **Investment Management Intern (Python, VBA)**
- Researched 240+ bonds and REITs and wrote reports on them, supplying comprehensive analysis to senior management to inform their trading decisions
  - Took initiative to meet wide range of data processing, analysis, and visualization needs; completed proprietary system to calculate trading performance

## PROJECTS

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- 09/21 - 05/24 **7 Projects in Quantitative Finance (Python)** New York, NY
- **FX Volatility Curve Construction:** Used SABR model to construct vol curves, given ATM vol, 25d RR, 25d Mkt Strangle quotes; calculated everyday vols considering weekend effect
  - **Down-and-out Barrier Call Pricing:** Used Monte Carlo simulation, Finite Difference, and analytical method to price down-and-out call; reached same result; compared accuracy and speed
  - **Snowball Structured Product Pricing:** Used binomial model with 3K layers to price snowball VWO issued by Barclays Bank; co-authored and published paper; improved pricing algorithm with GARCH volatility model and Monte Carlo simulation method; conducted comprehensive analysis on return scenarios, sensitivity, and Greeks
  - **Option Hedging Simulation:** Simulated BM and BS model stock price paths; hedged options with self-financing portfolio and plotted P&L; calculated historical and break-even volatility
  - **Option Hedging with Historical Data:** Hedged Apple's 6M options considering dividends; back-tested P&L; rolled by 1 day for 2 years and repeated; researched break-even volatility and skew
  - **Trinomial Model Construction:** Set up trinomial model by minimizing quadratic risk; compared its P&L with binomial models under equal initial endowment and equal delta conditions
  - **Data Analysis of Indices, Currency Pairs & Interest Rates:** Computed time series and distribution of correlation and volatility; compared VIX and vol indicators modeled in EWMA and GARCH

## COMPUTATIONAL SKILLS / OTHER

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**Programming Languages & Software:** Python, SQL, C++, MATLAB, VBA, SPSS, Stata, EViews, LaTeX, MS Office  
**Certificates & Awards:** [CFA Level II](#) candidate, [NCRE Level II](#), [MCM Finalist](#) (top 2% globally)