

HENGKAI MA

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EDUCATION

NEW YORK UNIVERSITY

New York, NY

The Courant Institute of Mathematical Sciences

M.S. in Mathematics in Finance (expected December 2022)

- **Coursework:** dynamic and nonlinear derivatives pricing, advanced risk and portfolio management, stochastic calculus (Girsanov, Feynman-Kac), OOP in Java, Python in finance (tailored machine learning, scientific computing, model selection, simulations and validations), fixed income, capital and credit derivatives, SVA, energy derivatives, financial alternative data.

UNIVERSITY OF TORONTO

Toronto, ON

Bachelor of Science

Mathematical Applications in Economics and Finance Specialist & Statistics Major (June 2021)

- **Coursework:** Applied math including calculus, linear algebra, convex optimization, microeconomic and macroeconomic theory, corporate finance, computer science, time series analysis (ARIMA, TFN, VAR models), statistical methods (Monte Carlo, Markov Chain)
- **Awards:** Winters of 2018, 2019, 2020: Dean's List Scholar; New College Council In-Course Scholarship

EXPERIENCE

TCW GROUP

New York, US

Emerging Market Equities Quantitative Analyst Intern (June 2022 - August 2022)

- Conducted research on factors introduced by research papers on predicting future stock return, backtested factors using past 9 years data from bloomberg.
- Collaborated with analysts to combine factors that perform well in backtesting into current quantitative model and value model screening.

CHINA ZHESHANG BANK

Jiangsu, China

Investment Banking Research and Analyst Intern (December 2020 - January 2021)

- Conducted research and statistical analyses on several industries; participated in due diligence; accurately predicted immediately impending direction of Chinese real estate market
- Liaised with multi-million-dollar clients on M&As and other corporate financing transactions; built relationships; prepared project proposals; took initiative to organize documents

MONEST FINANCIAL INC.

Toronto, Canada

Equity Research Analyst Intern (May 2020 - September 2020)

- Modeled Canadian and US stock market trends; produced research reports, projections, and recommendations concerning companies and stocks
- Built discounted cash flow models and evaluated business value under different scenarios

PROJECT

UNIVERSITY OF TORONTO

Toronto, ON

Canadian Bond Analysis (February 2021)

- Constructed yield, spot rate, and 1-year forward rate curve for forthcoming 5 years.
- Conducted PCA on daily log return of yield and forward rates

Sex Ratio at Birth Affected by Trump's Election (April 2020)

- Used dataset from government institution about Ontario population trend to analyze whether and which group got influenced by Trump's election in 2016 in their birth ratio using R
- Utilized GAM model to show increased severity in discrimination over Hispanic rather than Trump's election affected birth ratio in this group through increased stress

COMPUTATIONAL SKILLS/OTHER

Programming Languages: Python, R, Stata, MATLAB

Languages: Mandarin (native), English (fluent), Japanese (basic)

Certification: MCM Successful Participant Certificate in 2019