

## HENGKAI MA

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### EDUCATION

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#### NEW YORK UNIVERSITY

New York, NY

#### The Courant Institute of Mathematical Sciences

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

- **Coursework:** dynamic & 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 model), statistical methods (Monte Carlo, Markov Chain)
- **Awards:** 2018 Winter-Dean's List Scholar; 2019 Winter-Dean's List Scholar; 2020 Winter-Dean's List Scholar; New College Council In-Course Scholarship.

### EXPERIENCE

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#### CHINA ZHESHANG BANK

Suzhou, Jiangsu

#### Intern Analyst (December 2020 - January 2021)

- Engaged in project IPO, merger and reorganization, and other businesses in financing
- Conducted industry research and statistical analysis, participated in project due diligence, prepared project proposals and participated in project scheme design

#### MONEST FINANCIAL INC.

Toronto, ON

#### Equity Analyst (May 2020 - September 2020)

- Produced research reports, projections, and recommendations concerning companies and stocks.
- Built discounted cash flow models and evaluated business value under different scenarios.

#### SHANGHAI WUYIGE CERTIFIED PUBLIC ACCOUNTANTS LLP

Shanghai, China

#### Intern Auditor (August 2019 - September 2019)

- Produced audit reports which composed evaluation of internal control systems
- Performed strategic planning, execution, and finalization of audits
- Enhanced capability in communicating with clients, leaders and colleagues

### PROJECT

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#### UNIVERSITY OF TORONTO

Toronto, ON

#### Canadian Bond Analysis (February 2021)

- Using data of Canadian government bonds to construct yield, spot rate, 1-year forward rate curve for future 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 the discrimination over Hispanic rather than Trump's election affected birth ratio in this group through increased stress.

### COMPUTATIONAL SKILLS/OTHER

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**Programming Languages:** Python, R, Stata, MATLAB

**Languages (include level and spoken/written):** Mandarin (native), English (fluent), Japanese (basic)

**Certification:** Successful Participant Certificate in 2019 MCM