# ZHIXI CHEN

📞 +86 187 0748 5965  ✉️ chishsi.chen@outlook.com  in Chishsi Chen  ⚙ Revive-dontwanttocode

## Education

**Nanyang Technological University**                                      **Aug. 2024 – Dec. 2025**
*Master of Science in Data Science*                                                  *N/A*

**Northeastern University**                                              **Sep. 2020 – Jun. 2024**
*Bachelor of Engineering in Software Engineering(Fintech Track, minor in Finance)*       *GPA: 3.86/4*

## Honours and Awards

**2022 China Undergraduate Mathematical Contest in Modeling (CUMCM)**        **Nov. 2022**
*Develop mathematical and computer models to solve a simplified real-world problem.*          *China*
- Awarded the **National Second Prize** and the **Provincial First Prize**.

**2022 Mathematical Contest in Modeling (MCM)**                              **Apr. 2022**
*Analyze, model, solve, and present solution reports to an open-ended application problem.*       *U.S*
- Designated as the **Honorable Mention**.

**China Computer Software Copyright (StockInfoM)**                           **Apr. 2023**
*A software to query and visualize the stock data in China.*                          *China*
- As the **first inventor**, developed a cross-platform stock data visualization software sponsored by Prof. Yin Zhang.

**2023 Northeastern University LLM Financial Development Competition**        **Aug. 2023**
*Use Large Language Model to construct intelligent software to solve financial-related problems.*       *China*
- Won the **First Prize** and the **Most Creative Award**.
- Received a bonus of **CNY 3,000**.

**The 13$^{th}$ Blue Bridge Cup Programming Competition**                     **May. 2022**
*A programming contest.*                                                    *China*
- Won the **Provincial Third Prize** in the Python Group.

**China University Student Computer Design Competition**                      **May. 2023**
*An application design contest*                                             *China*
- Won the **Third Prize** in Northeastern University.

**Northeastern University School Scholarship**                          **2022 & 2023 & 2024**
*Awarded by Northeastern University.*                                       *China*
- Received the **Third Class** scholarships in Year 2022, Year 2023 and Year 2024.

**2021 National English Competition for College Students**                    **May. 2021**
*An English contest.*                                                      *China*
- Obtained the **National Third Prize**.

**Outstanding Individual with Academic Strengths at Northeastern University**    **2021 & 2022**
*A personal title of honour.*                                              *China*
- Granted the honour based on the qualification of having received national competition awards.

## Research Experience

**Cambridge AI+ Programme (Big Data and Financial Technology Track)**   **Jan. 2023 – Mar. 2023**
*Regression Analysis, Real estate market, Data Cleaning*
- Attended modules of *AI and its applications in data analysis and fintech* as part of the programme.
- Carried out the design and implementation of the research methodology and accomplished the research proposal focusing on the impact of economic policy uncertainty on China's real estate market.
- Utilized Python language for *data cleaning*, *regression analysis*, and *hypothetical test*. Collaborated with team members to write an empirical analysis report on the project.

**Research on Ancient Glassware Classify Problem**                            **Nov. 2022**
*Naive Bayes, Gray relational analysis, Pearson chi-square test, Second-order clustering*
- Utilized *Pearson's chi-square test* and *Cramer's V coefficient* to delve into the intricate relationships among the type, ornamentation, colour, and weathering condition of ancient glass artefacts' surfaces.
- Crafted an *exponential regression* model, showcasing its effectiveness in the data-prepossess part. In particular, it is important to predict the chemical composition content of sites before they undergo weathering processes.
- Constructed a *Naive Bayes model* for predicting categories of cultural relics with limited data. Our sensitivity analysis revealed the model's robustness, showing consistent results despite disturbances up to 10%. Even under a 20% perturbation, the model maintains an impressive accuracy of 94%.

- Wrote the paper and codes that finally presented our results. We were awarded the **National Second Prize** and the **Provincial First Prize** in CUMCM Competition.

### Research on Cash-Bitcoin-Gold Investment Portfolio Trading Strategy      Jan. 2022
*Mean-Variance Model, Sliding Window, ARIMA-GARCH Model, Hurst Exponent*

- Constructed a *sliding window* method to improve the basic CAPM model.
- Collaborated with two other members and employed the ARIMA-GARCH method to forecast future asset price changes. Designed a strategic asset trading approach that leverages the *efficient boundary curve*, balancing risk and return principles.
- Leveraging the return time series memory, we employed the *Hurst index* to predict trends in gold and Bitcoin. This facilitated a more effective balancing of risk and return in each asset weight iteration, guiding adjustments to the cash, Bitcoin, and gold holding ratios.
- Used python to conduct *back-testing* of the strategy and found that the strategy achieved relatively stable returns under the corresponding situation.
- Our work and paper were awarded as the **Honorable Mention** in MCM Competition.

## Internship

### Link-Us Tech Co., Ltd      May. 2023 − Jul. 2023
*Java Development Engineer*      *Changsha, Hunan*

- Contributed to an e-loan commercial bank system, an automatic risk assessment system for small loans using an AI access model.
- Used *Spring Boot* technology to complete back-end development.
- Took part in the development and testing review of the due diligence function for loan systems and the secondary admission process for provident fund loans.
- In August 2023, the developed e-loan system was successfully integrated into a bank's business system, ushering in new loan opportunities for the institution.

## Projects

### Financial Intelligent Assistant | *Python, C#, Semantic Kernel, Vue, Spring Boot, Spider*      Jun. 2023

- Developed an online web application based on the latest and most famous *large language model* (Microsoft Semantic Kernel), analyzing stock research reports, extracting researchers' sentiments toward stocks and key figures, and classifying research reports according to emotions.
- Led my team to build a front-end framework with Element UI and Vue, use Python to crawl research reports on related stocks and consult LLM for analysis.
- This project got the **First Prize** and the **Most Creative Prize** in a competition held by Software College, Northeastern University. With a bonus of **CNY 3,000**.

### StockInfoM Application | *C#, .NET MAUI, Polly, LiveCharts2*      Sep. 2022

- Developed the searching and data visualising cross-platform software for the stocks listed on Shanghai and Shenzhen Exchanges by utilising Microsoft's latest technology .NET MAUI.
- Act as team leader, designed the overall software architecture, wrote codes for data processing and display with *LiveCharts2*, and used the Polly library to handle transient failures that may occur when accessing the stock data API.
- With Associate Professor Yin Zhang's supervision, successfully applied for the computer software copyright registration (Registration No. 2023SR0473375) as the **first inventor**.

## Technical Skills

**Coding Languages**: Python(Advanced), .NET(Advanced), Java, C language, MySQL, Bash
**Data Analysis Tools**: Numpy, Pandas, Matplotlib, Seaborn
**Machine Learning Toolkits**: PyTorch, Scikit-Learn, CUDA
**Technologies / Frameworks**: Linux, Docker, .NET Core, Git, MongoDB, openLooKeng