

# Xu (Theo) Chen

xc454@cornell.edu

100 Fairview Sq Apt 4E, Ithaca, NY 14850

cell: 716.472.3609

## EDUCATION

**Cornell University**, College of Engineering  
*Master of Engineering in Financial Engineering*

**GPA: 3.74/4.3**

Ithaca, NY  
**Expected Dec 2023**

**University of Toronto**

*Honours Bachelor of Science with High Distinction in Statistics*

**GPA: 3.5/4.0, Dean's List for 4 years.**

Toronto, Canada  
**June 2022**

- Focus on Machine Learning and Data Science

## COURSEWORK/SKILLS

- **Finance:** Derivatives Securities, Fixed Income Securities, Risk Management
- **Math/Statistics:** Probability, Big Data Analysis, Time Series Analysis, Machine Learning Theory, Monte Carlo Simulation
- **Programming:** Python, R, C, Database (SQL), Web Application (HTML, JavaScript), Version Control (Git, SVN), Shell Script

## EXPERIENCE

**Quantitative Analyst Intern**, CSC Financial, Remote

**July to Aug. 2021**

- Gathered and preprocessed news data from social media. Visualized the news heat data and portfolio price together to observe their relationship. Identified significant price values beyond Bollinger Bands and reported corresponding long or short signals, improved portfolio performance to an average return of 2.88% with holding period of 50 days for long signals.
- Incorporated a news sentiment factor into the model to create a multi-news factor approach. Employed a weighted construction of the two factors to enhance the predictive power of the model, yielding an average excess return of 30.16% for short signals.

**Data R&D Engineer Co-op**, Mango TV, Changsha, China

**Sep. 2020 to April 2021**

- Designed and developed a Python-based crawler using Selenium for the Xiaomang e-commerce project. Utilized Appium to automate the search and download of TikTok videos based on influencer IDs, streamlining the data collection process.
- Contributed to the development of an internal data management platform by constructing 8 web interfaces, including data source management and alert management. Integrated the web interfaces with PostgreSQL and MySQL databases via Flask, ensuring efficient data processing and management, accounting for approximately 1/4 of the project's development efforts.
- Conducted Spark-based data cleansing into a standardized format, ensuring consistency and accuracy across various data sources.

## RESEARCH/PROJECTS

**Chemical Price Forecast** (team of 2), MyRedDeck Consulting, Richmond Hill, Canada

**May 2022**

- Developed a Python crawler using Scrapy to log in to a chemical online shopping website and retrieve information on chemicals for sale through multiple web redirects. Imported the collected data into a MongoDB database for analysis.
- Decomposed the historical price data and forecasted the future prices of specific chemicals using time series analysis with the ARIMA model. Employed R to visualize the predictions and provide insights to make data-driven decisions.

**Real-Time Bidding Alg. Design for a DSP** (team of 2), University of Toronto, Toronto, Canada

**Feb. 2022**

- Conducted data preprocessing by standardizing numeric feature data and utilizing multiple indicator columns to express categorical features. Fitted Lasso regression to select important features and predict click-through rates using R.
- Developed a linear relationship model to predict the bidding price by the competitor demand-side platform. Plotted contour lines, lasso coefficients, and ridge coefficients to optimize the bidding strategy.

## LEADERSHIP EXPERIENCE

**External Vice President** of UTFUN club, University of Toronto, Toronto, Canada

**June 2018 to June 2021**

- Spearheaded first-year student orientations, facilitating icebreakers, Ontario Lake walks, and hosting event receptions and sponsor introductions. Mentored and guided incoming students to help them integrate into university life.
- Organized a large-scale camping trip to Algonquin Park, managing transportation, tents preparation, and games for 80+ attendees.

## INTERESTS

- Board games (Mahjong, I'm the Boss), paddling, hiking, movies, tennis, traveling.