

# Chengrui Xu

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## EDUCATION

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**Cornell University**, College of Engineering, Ithaca, NY  
Master of Engineering in Financial Engineering, **GPA: 3.75**

**Expected December 2024**

**University of Wisconsin-Madison**, Madison, WI  
Bachelor of Science in Mathematics & Economics, **GPA: 3.92**

**May 2023**

*Awards:* Dean's List (8 consecutive semesters)

*Selected Coursework:*

Econometrics, Data Programming, Stochastic Process, Investment Theory, Derivative Securities, Optimization, Simulation Modeling and Analysis, Machine Learning, Fixed Income Securities, Behavioral Finance.

## SKILLS

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Technical: Python (Pandas, NumPy, scikit-learn), R, STATA, SAS, Matlab, Capital IQ

Languages: French (fluent), Mandarin (native)

## EXPERIENCE

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**Summer Intern – Risk Management**, *China Everbright Bank Credit Card Center*, Beijing, China **June to Aug. 2021**

- Analyzed the relationship between client default risk and information in credit reports through SAS; sought out characteristics from tables of credit application queries, loans, and credit card quotas that are highly correlated with high default risk; improved customer access criteria with the current risk tolerance threshold.
- Assessed the causes and impacts of co-debt risk; and highlighted the challenges in risk management and formulated a plan for future operations.
- Acquired knowledge of credit systems and industry fundamentals, focusing on the application of data analytics in financial risk assessment.

## PROJECTS

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**Kaggle Data Analysis Project: Wine Reviews**, *Ithaca, NY* **Jan. 2024**

- Organized and analyzed a dataset of wine reviews in Python, focusing on extracting and cleaning natural language descriptions.
- Visualized sentiment using word clouds and refined the dataset by removing unnecessary columns.
- Split the data into 80-20 train-test subsets and vectorized text data using CountVectorizer.
- Developed predictive models using Random Forest, Regression, and KNN to identify wines from blind tasting notes.

**Monte Carlo Simulation Modeling**, *Cornell University, Ithaca, NY* **Nov. to Dec. 2023**

- Collaboratively developed a stochastic model in Python to simulate employee dynamics and analyze gender disparities in the company, employing discrete-event modeling.
- Constructed a simulated corporate environment, consulting academic literature and data to establish assumptions and parameters.
- Executed the simulation, visualizing the impacts of gender bias across various company levels, which revealed a disproportionately adverse impact on females at higher career levels.
- Investigated the effects of early departure rates and gender bias in promotions by varying parameters and settings within the simulation environment.
- Explored and evaluated the efficacy of different promotional strategies to mitigate gender disparity within the company, contributing insights for decision-making regarding promotion policies.

**Datawhale & Tianchi Competition: Financial Risk Management for Loan Default Risk**, *Madison, WI* **Sep. 2022**

- Compiled a dataset of 800,000 entries of loan information from a loan credit website; classified the variables as numerical, categorical, discrete, or continuous; and formed data binning histograms to reduce the cardinality of continuous variables in Python.
- Computed the final score for each loan applicant by using coefficients created by logistic regression in order to forecast whether applicants will default on loans.

## ACTIVITIES/INTERESTS

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Interests: Investment, Swimming, Scuba diving, Camping, Chinese calligraphy, Gardening