

Education

University of Southern California Bachelor's Degree of Science in Economics and Data Science & Applied and Computational Mathematics	Class of 2026
College of William and Mary Bachelor's Degree of Science in Mathematics Cumulative GPA:3.96/4.00	2022-2023
Relevant Coursework: Advanced Mathematics / Econometrics / Data Structures/ Statistical & Financial Modeling	

Work & Leadership Experience

ZheShang Property and Casualty Insurance Co., Ltd. <i>Car Insurance Actuary Intern</i>	Hangzhou, China 2024/07—2024/08
<ul style="list-style-type: none">Developed a Python-based automated system to crawl and distribute daily insurance news from the State Administration of Financial Supervision and Administration, significantly improving team awareness and keeping the team informed in real-timeImplemented a multilayer perceptron (MLP) neural network to predict the loss ratio for privately owned vehicles under Motor Vehicle Accident Liability Compulsory Insurance, achieving a 3% higher prediction for the top percentile compared to the bottom percentile, highlighting opportunities for further data refinement and model optimization	
Huatai Securities Co., Ltd. <i>Quant Trading Intern</i>	Shanghai, China 2024/05—2024/07
<ul style="list-style-type: none">Investigated the mathematical foundations and performance of solvers for constrained quadratic programming, focusing on <code>scipy.minimize(SLSQP)</code> and <code>Mosek(ITP)</code>Enhanced the SLSQP solver for convex functions by incorporating a reconstructed Lagrangian Index into the KKT conditions. This improvement was achieved through the analysis of the solver's subproblem, derived from linearizing around the optimized pointImproved the Mosek solver by implementing a convexity verification and adjusting the iteration speed to 12.5, resulting in over 10% of optimization accuracy in the multi-factor modelingExtensively tested the DDGDA prediction model of Microsoft Research under weak features to ensure the effective extraction of 30 features from a predictable concept drift	
Nanjing Intelligent Logistics Technology Co., Ltd. <i>Strategic Investigation Group Analyst Intern</i> <i>Analyst Intern</i>	Nanjing, China 2023/06—2023/08 2022/06—2022/08
<ul style="list-style-type: none">Led team's efforts to improve User Collaborative Filtering System using König-Egeváry Theorem, increasing sorting performance by over 20%Built average transportation price prediction model using the ARIMA time series, resulting in less than 5% errorLed team to incorporate over 10 million orders into the six most popular routes and the 5 most preferred areasSimulated price index with the Laspeyres index, the Paasche Index, and the Fisher index by taking time and commodity type as factors	

Research Experience

Independent Research on CTA factor generator based on genetic programming	2024/04—2024/07
<ul style="list-style-type: none">Collected and analyzed the common GPlearn model for generating CTA factors, preserving explainable factors through feature importance calculation and correlation analysis between chosen factors and the target variableImproved the tournament selection process by applying elitism to eliminated parents in each round and preserve them for three more generations, as well as raising the mutation probability to 95%, increasing the average Calmar ratio by 5.4%	
Research on topics of graph theory in Sudoku Advisor: Professor Gexin Yu Participant: Yunzhong Ding	2023/03—2024/05
<ul style="list-style-type: none">Studied the graph theory properties on a 9 by 9 Sudoku and expanded the theorems to $n \times n$ matricesDeveloped a searching algorithm that solves Sudoku using coloring strategies through identifying certain coloring patterns, successfully decreasing the time complexity to $O(n)$ for n by n Sudoku with recognized patterns	

Awards & Honors

Prosperity 2 Trading Competition — Global Top 15%
Virginia Tech Regional Math Contest — Highest Score at W&M
Johnson & Johnson Case Competition — Second place of USC
Certificate of completing Bloomberg Market concepts
American Mathematics Competition — Top 5%
The American Regions Mathematics League — National Top 100 & National Gold Prize

Skills, Activities & Interests

Technical Skills: Proficiency in python, Java, C++, Matlab, SQL, Excel, Gretl
Activities: Soccer club co-founder and co-captain at W&M; W&M and USC Go game club founder; Volunteer math tutor at Step Up Tutoring; Undergraduate member of Risk Management Association
Interests: Classical music, badminton, and Chinese calligraphy