Mitchell (Mitch) Verhelle

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EDUCATION

The University of Chicago   **Chicago, IL**
Master of Science in Financial Mathematics   **Expected December 2025**
- Maroon Scholarship
- Courses: Portfolio Theory & Risk Management, Python, Option Pricing, Probability & Stochastic Processes

Cornell University   **Ithaca, NY**
Bachelor of Arts in Computer Science; Bachelor of Arts in Mathematics (GPA: 3.54)   **May 2024**
- Courses: Probability, Statistical Decision Theory, Linear Algebra, Partial Differential Equations, Numerical Analysis & Differential Equations, Intro to Machine Learning, Extreme Values in Finance

SKILLS

Computing: C++, Python (SciPy, PyTorch, NumPy, Pandas), Java, Matlab, R, JMP, Excel
Knowledge: Financial Markets, Machine Learning, Statistical Modeling, Data Analysis, Data Structures and Algorithms

EXPERIENCE

Innovation Finance USA LLC   **Rochester, NY**
Finance Intern   **July 2023 - September 2023**
- Managed insurance certificate renewal requests & funding checklist for backlog accounts
- Collaborated with operations team to review credit approvals & improve customer experience
- Analyzed 125 customer support threads & proposed simplified organization system
- Learned credit scoring with Equifax, insurance procedures, and app updates in weekly meetings

Cornell Stable Isotope Lab   **Ithaca, NY**
Student Researcher/Lab Assistant (Part-Time)   **August 2022 - June 2023**
- Prepared & organized thousands of samples for isotope analysis
- Trained new lab workers on lab procedures and sample preparation tasks

Recly   **Naples, FL**
Software Engineering Intern   **June 2022 - July 2022**
- Employed the ERN stack (Express React Node.js) in ReclyApp
- Reconfigured in-app timing mechanism to work without bugs

AWARDS & ACTIVITIES

Honorable Mention | 2024 International Mathematical Contest in Modeling (MCM) | Team 2429345
COMAP, Inc
- Awarded Honorable Mention for placing in top 31% of participants worldwide
- Implemented Long Short-Term Memory (LSTM) and Random Forest models to predict momentum swings

1st Place | 2023/24 Cornell Mathematical Contest in Modeling | Team 11
Cornell University
- Optimized invasive species spread loss PDE & programmed agent-based model to validate solution

ACADEMIC PROJECTS

ORIE4656 Extreme Values in Finance - Final Project   **Ithaca, NY**
Analyzing XCMG and JPM Extremes   **March 2024 - May 2024**
- Devised robust analysis of extreme value distribution shape parameters in R earning a perfect score
- Compared shape parameters and extremal indices of two stocks in different industries

CS4780 Spring 2024 Kaggle Competition - Hearts   **Ithaca, NY**
Heart Disease Predictor   **April 2024 - May 2024**
- Placed 7th among 129 participants earning full extra credit points
- Implemented Adaboost Logistic Classifier and Extreme Gradient Boosting Decision Tree Classifier models with PCA to improve variance and bias