

# MITCHELL VERHELLE

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## Education

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### University of Chicago

MS Financial Mathematics · Maroon Scholarship

(Expected) Dec 2025

Chicago, IL

### Cornell University

BA Computer Science & Mathematics · 3.54 GPA

May 2024

Ithaca, NY

## Experience

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### QuickFi by Innovation Finance USA, LLC

#### Finance Intern

July – Sep 2023

Rochester, NY

- Managed insurance certificate renewal requests & funding checklist for backlog accounts.
- Analyzed 125 customer support threads & proposed simplified organization system.
- Weekly 1-on-1 meetings to learn about credit scoring with Equifax, insurance procedures, and app updates.

### Reclly

June – Aug 2022

#### Software Engineering Intern

Naples, FL

- ERN stack (Express React Node.js) to program and test “RecllyApp”.
- Weekly company meetings with development team.

### Cornell Stable Isotope Lab

Aug 2022 – June 2023

#### Student Researcher/Lab Assistant (1 year)

Ithaca, NY

- Enacted lab procedures to efficiently prepare samples and standards for head researchers.
- Trained new lab workers on lab protocol and procedures.

## Awards

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### Honorable Mention · International Mathematical Contest in Modeling

Feb 2024

Team: 2429345

COMAP

- Developed time series model for momentum.
- Used a Long Short-Term Memory model to analyze momentum in tennis.
- Developed LSTM and Random Forest models to predict momentum swings coded in Python.
- Wrote 25 page manuscript about our modeling process and results.

### 1<sup>st</sup> Place · Cornell Mathematical Contest in Modeling

Nov 2023

Team: 11

Cornell University

- Programmed an agent-based model to optimize custom partial differential equation of invasive species spread.
- Wrote 30 page solution manuscript.
- Teamwork with 2 fellow undergraduates.

## Technical Skills

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**Languages:** Python, Matlab, Java, Javascript, R, SAS (JMP)

**Libraries:** SciPy, PyTorch, NumPy, Pandas, Matplotlib, Seaborn

**Tools:** Jupyter-Notebook, VS Code, GitHub, Excel

## Projects

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### Modeling Extreme Value Distribution of Financial Returns in R

Paper

- Robust analysis of extreme value distribution shape parameters using R-Studio.
- Compares shape parameters and extremal indices of two stocks in different industries.
- This project received full marks.

### Heart Disease Prediction Model (MBV27)

Source Code

- Implemented Adaboost Logistic Classifier and XGBoost Random Forest Classifier models.
- Preprocessed data and used feature engineering to improve model variance and bias.
- Placed 7/129.

## Related Undergrad Coursework

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**Math:** Basic Probability (A), Statistical Decision Theory (A+), Linear Algebra (A-)

**Computer Science:** Intro to Machine Learning (A), Foundations of AI (A), Numerical Analysis & Diff Eqs (A-)

**Finance:** Business Statistics (A-), Extreme Values in Finance (A)