# Elliot Hanson

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## Education

Bachelors of Arts in Mathematics, Computer Science Minor December 2025 University of Minnesota: Morris, Morris, Minnesota

### Honors & Awards

Graduating with High Distinction	2025
Graduating with Honors	2025
Stipend from the Scott A. Schultz Memorial Fund (\$3,000)	2025
Morris Academic Partnership Scholarship (\$4,000)	2024
Morris Scholars Package (\$30,500)	2023
Dean's List	Fall 2021 - Fall 2025

# Research Experience

Game Theory Spring 2025 - Fall 2025

- Worked with Dr. David Roberts.
- Developed intuitive representations and visualizations for the space of all  $2 \times 2$  games.
- Figures and interactive visualizations were made using Mathematica.
- A co-authored paper is in preparation.

#### Computer Science

Fall 2025

- Worked with Dr. Lisa Bevevino.
- Developed tools to compile, tokenize, and analyze the sounds from the poetry of the troubadours.
- Tools were made using C++ and Python.
- A co-authored paper is in preparation.

#### **Graph Theory**

Fall 2024 - Summer 2025

- Worked with Dr. Peh Ng.
- Analyzed the effectiveness of heuristics for the vertex coloring problem on very large graphs.
- All algorithms were implemented in C++.

## **Presentations**

"Numerical Results of New and Modified Heuristics for the Vertex Coloring Problem."

Undergraduate Student Poster Session, MAA MathFest 2025, Sacramento, CA. August 8, 2025.

## Teaching and Leadership Experience

- Worked as a peer tutor for six semesters.
  - Acquired a level 1 CRLA certification through this work.
  - Involved holding weekly study sessions for Calculus 1 and/or Calculus 2.
  - Additionally involved one-on-one sessions and drop-in hours, supporting Calculus classes, pre-Calculus classes, real analysis, linear algebra, physics, statistics, computer science, Latin, and other classes.
  - Required continuous interaction with faculty and staff.
- Served as president of Math Club.
  - Involved planning weekly activities with the goal of communicating mathematics to a broader audience.
  - Spoke with a varied group of young people interested in learning about math.
- Was the student representative for the mathematics department at UMN Morris.
  - Advocated for the interests of the student body.
  - Was the representative during the 2024-2025 academic year.
  - Involved attending discipline meetings and science and math division meetings.
- Was captain of a robotics team for two years in high school.
  - Responsibilities included facilitating the design, development, and construction of the robot, as well as training and recruiting new members. Teams included between 5 and 15 members.

## Skills and Languages

- Proficient with LaTeX and Mathematica
- Programming languages: C++, Python, Java, JavaScript/HTML/CSS
- English, Latin, limited Spanish, limited Italian