

Violet Ross

COMPUTER SCIENCE AT CU BOULDER

Boulder, CO

✉ violet.ross@colorado.edu

Education

University of Colorado Boulder

PHD IN COMPUTER SCIENCE

Boulder, CO

Aug. 2025 - Present

Middlebury College

B.A. IN COMPUTER SCIENCE AND MATHEMATICS

Middlebury, VT

Sep. 2021 - May 2025

- 3.96 GPA
- Phi Beta Kappa, Summa Cum Laude, Highest Honors Computer Science, High Honors Mathematics

Experience

RESEARCH

University of Colorado Boulder

COMPUTER SCIENCE RESEARCH ASSISTANT

Boulder, CO

Aug. 2025 - Present

- Conducting mathematical methods research in network science and computational infectious disease epidemiology.

Middlebury College

COMPUTER SCIENCE RESEARCH ASSISTANT

Middlebury, VT

Jun. 2024 - Aug. 2024

- Designed a growth model for labelled hypergraphs and implemented it in Python.
- Utilized probabilistic and analytical methods to describe the relationship between parameter choice and the distribution of node labels.
- Verified these results by carrying out hypergraph growth simulations on Middlebury's high-performance computing cluster.

Yale University

MATHEMATICS RESEARCH ASSISTANT

New Haven, CT

Jun. 2023 - Jul. 2023

- Participated in Yale University's "SUMRY" REU in mathematics on the Ambient Dimension of Manifold-fitting Data project.
- Implemented a model in R to non-trivially embed an intrinsically 3-dimensional manifold in any ambient dimension and then uniformly sample points from the embedding.
- Conducted research on the impact of high ambient dimension on the accuracy of intrinsic dimension estimators through both experiments and theoretical methods.

Middlebury College

STATISTICS RESEARCH ASSISTANT

Middlebury, VT

Jun. 2022 - Aug. 2022

- Quantified social media responses to U.S. drone strikes in Yemen.
- Published a paper on these findings and gave talks at the 2023 Joint Mathematics Meetings and the 2023 Joint Statistical Meetings.

TEACHING

Middlebury College

MATH 0118: INTRODUCTION TO DATA SCIENCE TEACHING ASSISTANT

Middlebury, VT

6 Semesters

- Provided daily in-class programming and debugging support for students.
- Held two additional help sessions per week.
- Graded all homework assignments.

Middlebury College

CSCI 301: THEORY OF COMPUTATION TEACHING ASSISTANT

Middlebury, VT

1 Semester

- Held two help sessions per week for students.

Middlebury College

MATH 0218: STATISTICAL LEARNING TEACHING ASSISTANT

Middlebury, VT

1 Semester

- Held one help session per week for students.

Middlebury College

MATH 105: EXPONENTS, LOGARITHMS, AND FUNCTIONS (PRE-CALCULUS) TEACHING ASSISTANT

Middlebury, VT

1 Semester

- Provided daily in-class problem-solving support to students.

Publications

Talks

International School & Conference on Network Science

Boston, MA

“MODELING HOMOPHILIC HYPERGRAPH GROWTH USING EDGE COPYING”

Jun. 2026

- Upcoming.

Joint Mathematics Meetings

Boston, MA

“QUANTIFYING RESPONSES TO U.S. DRONE STRIKES IN YEMEN USING TWITTER DATA”

Jan. 2023

- Described the quantitative methods and results of my research on U.S. drone strikes in Yemen.

Joint Statistical Meetings

Toronto, Canada

“CHARACTERIZING THE COMMUNITIES THAT EMPLOY ACADEMIC TRACKING ACROSS THE U.S.”

Aug. 2023

- Presented the results of my independent study in statistics at Middlebury College. I studied the ways in which academic tracking in United States public schools relates to levels of socioeconomic diversity and inequality in communities.

Middlebury College Introduction to Data Science Course

Middlebury, VT

INVITED GUEST LECTURER

Oct. 2022, Apr. 2023, Apr. 2024, Oct.

2024, Apr. 2025

- Introduced key skills for performing text analysis in R.