# Sara Kathryn Colando

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✉ scolando@andrew.cmu.edu
 GitHub

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## EDUCATION

**Ph.D. in Statistics**, Carnegie Mellon University, Pittsburgh, PA    2024 - 2029 *(expected)*

**B.A. in Mathematics and Philosophy**, Pomona College, Claremont, CA    2024

Magna cum laude (GPA: 3.99/4.00) and departmental honors

- Math thesis supervised by Jo Hardin, titled "Selecting ChIP-Seq Normalization Methods from the Perspective of their Technical Conditions."
- Philosophy literature review supervised by Julie Tannenbaum, titled "What are the Key Philosophical Conceptions of Fairness and Justice?" with an emphasis on conceptions relevant to algorithmic fairness.

## PUBLICATIONS AND PAPERS

- **Peer-reviewed articles**

  2. Colando, S., Schulz, D., Hardin, J. **Selecting ChIP-Seq Normalization Methods from the Perspective of their Technical Conditions**, *Briefings in Bioinformatics*, *26*(4), 2025. https://doi.org/10.1093/bib/bbaf431

  1. Colando, S. & Hardin, J. **Philosophy within Data Science Ethics Courses**, Journal of Statistics & Data Science Education, *32*(4), 2024. https://doi.org/10.1080/26939169.2024.2394542

- **In progress**

  2. Colando, S., Franke, E., Reinhart, A. **Analyzing Statistics Students' Writing Before and After the Emergence of Large Language Models.** In progress.

  1. Colando, S., Niezink, N.M.D, Jaspers, E. **Why Do Students Avoid Each Other? Investigating Positive and Negative Network Effects.** In progress.

## TEACHING EXPERIENCE

**Carnegie Mellon Department of Statistics & Data Science**
Graduate Teaching Assistant

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|---|---|
| 36-402: Undergraduate Advanced Data Analysis | Spring 2026 |
| 36-707: Regression Analysis, *guest lectured on penalized regression* | Fall 2025 |
| Carnegie Mellon Sports Analytics Camp, *co-taught four lectures* | Summer 2025 |
| 36-226: Introduction to Statistical Inference, *Head TA* | Spring 2025 |
| 36-600: Overview of Statistical Learning and Models | Fall 2024 |

**Pomona College**

Course Mentor and Grader

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| MATH158: Statistical Linear Models | Spring 2024 |
| MATH058B: Introduction to Biostatistics | Spring 2023 |
| ID001: First-Year Interdisciplinary Seminar: I Disagree | Fall 2023 |
| BIOL040: Introductory Genetics with Lab | Fall 2022 |
| MATH060: Linear Algebra | Fall 2021 |
| 1-2-1 Summer Bridge Program | Summer 2021 |

## PRESENTATIONS

16. **Colando, S.** "Why Do Students Avoid Each Other? Investigating Positive and Negative Network Effects", ADA Presentation, Carnegie Mellon University, November 2025.

15. **Colando, S.** "Why Do Students Avoid Each Other? Investigating Positive and Negative Network Effects", Networkshop Research Group, Carnegie Mellon University, November 2025.

14. **Colando, S.** "Why Do Students Avoid Each Other? Investigating Positive and Negative Network Effects", Institute for Complex Social Dynamics Works-in-Progress, November 2025.

13. **Colando, S.** & Franke, E. "Analyzing Statistics Students' Writing Before and After the Emergence of Large Language Models" (poster), United States Conference on Teaching Statistics, July 2025.

12. Franke, E. & **Colando, S.** "Teaching Data Cleaning and Wrangling with R's `data.table` Package" (poster), United States Conference on Teaching Statistics, July 2025.

11. **Colando, S.** "Predicting Avoidance Ties within Social Networks (ADA Progress Update)", Networkshop Research Group, Carnegie Mellon University, March 2025.

10. **Colando S.** & Franke, E. "Computational Efficiency of R's `data.table` Package", StatBytes, Carnegie Mellon University, March 2025.

9. **Colando, S.** & Hardin, J. "Philosophy Within Data Science Ethics Courses", CAUSE Webinar Series, October 2024.

8. **Colando, S.**, Pipping, J., Wilson K. "Clustering Race Horse Movement Profiles to Discover Trends in Injured Horses", Carnegie Mellon Sports Analytics Conference 2023, November 2023.

7. **Colando, S.** "Analyzing Data Science Ethics Pedagogies" (poster), Claremont Center for Mathematical Sciences, September 2023.

6. **Colando, S.** "Analyzing Data Science Ethics Pedagogies" (poster), Intensive Summer Experience Symposium, September 2023.

5. **Colando, S.**, Pipping, J., Wilson K. "Clustering Race Horse Movement Profiles to Discover Trends in Injured Horses", Summer Undergraduate Research Experience 2023 Project Showcase, July 2023.

4. **Colando, S.** Panelist for "Pomona Funded Summer Experiences Informational Session", Family Weekend, October 2022.

3. **Colando, S.** "Analyzing ChIP-Seq Normalization Techniques through the Lens of their Biological Assumptions" (poster), Intensive Summer Experience Symposium, September 2022.

2. **Colando, S.** "Analyzing ChIP-Seq Normalization Techniques through the Lens of their Biological Assumptions" (poster), Claremont Center for Mathematical Sciences, September 2022.

1. Chu, C., **Colando, S.**, Nandi, D., Serrano, X. "Quantifying Uncertainty in a Tumor Segmentation Model" (poster & presentation), A Symposium on Big Data, Human Health, and Statistics. July 2022.

## GRANTS

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|---|---:|
| Carnegie Mellon University Institute of Complex Social Dynamics | 2025-2027 |
| Title: "Graduate Student Fellowship" | |
| Role: Recipient | $6,000/year |
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| Carnegie Mellon University Department of Statistics & Data Science | 2025 |
| Title: "StatBytes Travel Grant" | |
| Role: Co-recipient | $500 |
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| National Science Foundation (Award Abstract: #2303612) | 2025 |
| Title: `data.table` Ambassador Travel Grant | |
| Role: Co-recipient | $2,700 |
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| Pomona College Department of Mathematics and Statistics | 2024 |
| Title: "Kenneth Cooke Summer Research Fellowship" | |
| Role: Recipient | $4,200 |
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| Pomona College | 2022, 2023 |
| Title: "Summer Undergraduate Research Program (SURP)" | |
| Role: Recipient | $4,200 |

## LEADERSHIP AND SERVICE

**Professional Service**

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| *Journal of Statistics and Data Science Education* Referee | 2025-*present* |
| CMSAConference Reproducible Research Competition Judge | 2025 |
| Undergraduate Statistics Project Competition (USPROC) Judge | 2025 |
| ASA K-12 Data Visualization Poster Competition Judge | 2025 |

**Carnegie Mellon University Department of Statistics & Data Science**

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| Co-head of Ph.D. Mentorship Committee | 2025-*present* |
| Co-founder of TidyTuesday Club for Undergraduate Students | 2025-*present* |
| Mentor for Undergraduate Statistics Students | 2025-*present* |

**Pomona College Department of Philosophy**

Student Representative on Tenure-track Faculty Hiring Committee                    2023-2024

**Pomona-Pitzer Athletics**

Varsity Women's Cross Country Team Captain                    2023

## WORKSHOPS AND REU PROGRAMS

Intelligence, Data, Ethics, And Society Summer Program, University of                    Summer 2023
California, San Diego

Carnegie Mellon Sports Analytics Camp                    Summer 2023

Big Data Summer Institute, University of Michigan                    Summer 2022

## HONORS AND AWARDS

Passed First-year Ph.D. Data Analysis Exam with Distinction                    2025

Blair Nixon Award                    2024

Bruce Jay Levi Senior Prize                    2024

W.T. Jones Prize in Philosophy                    2024

Phi Beta Kappa                    2024

Sigma Xi                    2024

Pomona College Scholar                    2020-2024

Women's Cross Country and Track and Field Varsity Letter Recipient                    2020-2024