# Carissa Mayo

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## Objective

I am an applied statistician and data scientist with a strong mathematical background and a passion for using data to drive real-world impact. I thrive in dynamic environments and enjoy learning new tools and concepts to bridge the gap between technical analysis and practical decision-making by creating clear and actionable insights.

## **Key Skills**

Technology: R, Python, MATLAB, Microsoft Office Suite, Git

**Data Science:** Advanced Modeling, Optimization, Statistical Inference, Data Structures, Spatial Statistics, Epidemiological Models, Introductory Machine Learning, Biostatistics, Data Visualization

#### Education

#### University of Washington, Seattle

Sept 2023 - Mar 2026

MS in Quantitative Ecology and Resource Management

### University of Colorado, Boulder

Aug 2019 - May 2023

BA in Statistics and Data Science (Class Rank #1) Minors in Computational Biology and Computer Science

## Experience

**Graduate Research Assistant: Metzger Lab**, Pacific Northwest Research Institute - Seattle, WA

June 2024 - present

- Developing epidemiology models to study transmissible cancer trends and patterns in clam populations.
- Using ecological survey data and laboratory data to inform model formulations, predictions, and validations.
- Presenting analyses in a highly interdisciplinary and collaborative environment and keeping organized data pipelines to ensure data harmonization by creating unified schemas.

Research Assistant: Peleg Lab, University of Colorado - Boulder, CO

May 2022 – Aug 2023

- Collected and analyzed biological data from field and laboratory experiments, supporting data integrity through detailed documentation and tracking to enhance workflow.
- Applied spatiotemporal analysis to uncover spatial behavioral patterns.

**Laboratory for Interdisciplinary Statistical Analysis (LISA) Program**, University of Colorado - Boulder, CO

Aug 2022 – Dec 2022

- Trained in statistical consulting to become an effective interdisciplinary collaborator to solve research problems and make data-driven decisions.
- Assisted scientists to identify data needs in their research and communicate insights to non-technical stakeholders.

Data Scientist Intern, Environment for the Americas - Boulder, CO

Jun 2021 - Aug 2021

- Provided data analysis, as well as scientific writing expertise, to a nonprofit environmental organization.
- Created data reports to present insights clearly in a storytelling manner using MS Suite.

#### **Publications**

Giersch, R., Sevigny, J., Weinandt, S., **Mayo, C.**, et al. Variation in Natural Infection Outcomes and Cancer Cell Release from Soft-Shell Clams (Mya arenaria) with Bivalve Transmissible Neoplasia. PLoS Pathog 21(9).(2025). 10.1371/journal.ppat.1013537

Gharooni-Fard, G., Byers, M., Deshmukh, V., Bradley, E., **Mayo, C.**, Topaz, C., Peleg, O., A computational topology-based spatiotemporal analysis technique for honeybee aggregation. npj Complex 1, 3 (2024). 10.1038/s44260-024-00003-1