

Carissa Mayo

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Summary

Data scientist with end-to-end analytics experience (ETL → modeling → interpretation → collaborator-ready outputs). Skilled in Python, R, and SQL with strengths in experimental design, model development, and communicating updates to interdisciplinary teams. Seeking to apply analyses to develop actionable solutions.

Key Skills

Technology: Python, R, Git/GitHub, SQL, Excel, STAN

Data Science: advanced modeling, statistical inference, uncertainty analysis, reinforcement learning, machine learning, data visualization, data quality assurance, Bayesian modeling

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 Computer Science and Computational Biology

Experience

Graduate Research Assistant: Metzger Lab, Pacific Northwest Research Institute - Seattle, WA Jan 2024 – present

- Manipulates large datasets and performs ETL to prepare heterogeneous data for model inputs.
- Builds and interprets machine learning models to address team questions and identify critical parameters in the problem space using Bayesian methods.
- Develops proof of concept for publications and communicates results to a non-technical audience.

Research Assistant: Peleg Lab, BioFrontiers Institute - Boulder, CO May 2022 – Aug 2023

- Worked with a team using clustering and classification analysis to identify trends in behavioral data, which led to a scientific publication.
- Collected and analyzed biological data from field and laboratory experiments, supporting data integrity through detailed documentation and tracking to enhance workflow.

Laboratory for Interdisciplinary Statistical Analysis, University of Colorado - Boulder, CO Aug 2022 – Dec 2022

- Trained in interdisciplinary consulting to help scientists design statistically sound studies and interpret results.
- Provided data analysis support and communicated insights to non-technical stakeholders, reinforcing reproducibility and best practices in experimental design.

Data Scientist Intern, Environment for the Americas - Boulder, CO Jun 2021 – Aug 2021

- Analyzed conservation program data to assess performance metrics for environmental education initiatives.
- Developed reports and data summaries with Microsoft Suite to communicate trends to leadership and the public.

Publications

Giersch, R., Seigniny, 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