Carissa Mayo

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Summary

Applied data scientist with end-to-end analytics experience (ETL → modeling → interpretation → collaborator-ready outputs). Skilled in Python and R with strengths in experimental design, model development, and communicating with 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, machine learning, data visualization, data quality assurance, Bayesian modeling, population modeling, epidemiological 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 to prepare heterogeneous data for model inputs.
- Builds and interprets population-level Bayesian statistical models to answer team questions, estimate key parameters, and generate forecasts.
- 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., 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