

Chase James

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Career Profile

Data scientist currently in academia working in oceanography. Experienced in leveraging diverse datasets to uncover underlying dynamics and relationships. Skilled in working with data-limited systems and large-scale datasets using data reduction and machine learning techniques. Strong focus on data visualization and translating analysis into clear narratives. Currently developing advanced mathematical modeling skills at USC to explore complex systems.

Professional Experience

University of Southern California — Postdoctoral Scholar (Aug 2022 – Present)

- Developing an eco-evolutionary mathematical model capturing microorganism dynamics at the base of the marine food web.

Scripps Institution of Oceanography — PhD (May 2019 – 2022)

- Analyzed large DNA datasets using statistical methods and machine learning techniques.
- Conducted nonlinear time series analysis to identify causal interactions from empirical data.

MarFishEco — Data Visualization Lead (June 2020 – Present)

- Led projects involving data-limited stock assessments, fleet-wide carbon emissions, and bycatch analyses.
- Directed analytics workflows from data processing through visualization and full report development.

Relevant Skills

- R and Julia (advanced proficiency)
- MATLAB and Python (working proficiency)
- Statistical modeling and machine learning
- Data visualization and analytical storytelling

Education

University of California, San Diego

Bachelor of Science, General Biology — GPA: 3.790

Master of Science, Biology — GPA: 4.0

PhD, Biological Oceanography — GPA: 3.92

Selected Publications

- James, C.C., et al. (2022). Transitions in nutrient supply drive variation in pelagic ocean microbiome biodiversity and distribution in a coastal upwelling ecosystem. *Nature Communications*.
- Agarwal, V., James, C.C., et al. (2021). Intraseasonal predictability of natural phytoplankton population dynamics. *Ecology and Evolution*.
- Giron-Nava, A., James, C.C., et al. (2017). Quantitative argument for long-term ecological monitoring. *Marine Ecology Progress Series*.
- The Unrawled Truth: Why EU fisheries policy should strengthen discard monitoring, control and reporting (2022). WWF.