

Ian Morris-Sibaja

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EDUCATION

Master of Environmental Data Science, (June 2025)

Bren School of Environmental Science & Management – University of California, Santa Barbara

Highlighted Coursework: Environmental Machine Learning, Geospatial Analysis, Cloud Computing for Earth Data, Python for Data Science, Git Version Control for Data Science, Applied Causal Inference

Bachelor of Science in Biology (June 2022)

University of California, Los Angeles

Highlighted Coursework: Applied Data Science, Data Structures and Algorithms , Ecological Modeling

Honors/Awards: Departmental Honors, Specialization in Computing

PROJECT EXPERIENCE

Assessing Range Shifts of Coastal Species in California's Biogeographic Transition Zones (06/25)

- **Designed and launched** the [California Ranges of Intertidal Species Portal \(CRISP\)](#), an interactive web app on The Nature Conservancy's Dangermond Geospatial Hub.
- **Applied** statistical modeling (GAMs, CDFs) and ensemble species distribution models in R to analyze 24 years of intertidal biodiversity/climate data, projecting range shifts under SSP 4.5.
- **Developed** a novel species range shift assessment framework, revealing an average 28.7% projected habitat loss, directly informing coastal conservation strategies.

Effects of Climate Change on Flowering Phenology of Californian Annual Forbs (06/22)

- **Managed and analyzed** 9,000+ flowering records and 6,000 climate observations spanning 50 years, performing data wrangling and cleaning to prepare datasets for analysis.
- **Applied regression modeling and statistical analysis** (p-values, R², coefficients) to quantify the relationship between temperature, precipitation, and flowering phenology by regional divisions.
- **Generated actionable insights on climate-driven ecological shifts**, identifying that native species such as *Clarkia bottae* bloom ~11 days earlier per +1°C while invasives remain stable.

WORK EXPERIENCE

Associate Biologist – South Environmental, Pasadena, CA (10/23–08/24)

- **Collected and managed** geospatial ecological data using submeter-accurate GPS and ArcGIS, ensuring high-quality datasets across 200+ vegetation observations and wildlife records.
- **Conducted** pre-construction surveys and real-time construction monitoring to safeguard sensitive resources, including nesting birds, protected trees, waters of the state, and multiple listed species.
- **Collaborated** with interdisciplinary teams of biologists, contractors, and regulators to integrate ecological protections into project planning, directly reducing construction environmental impacts.

Forestry Aide – California State Parks, Ventura, CA (05/23–09/23)

- **Engineered** a reproducible workflow by cleaning and manipulating 3 years of data and 1000+ observations using Python and ArcGIS to create surveys, analyzing vegetation distributions
- **Introduced** a comprehensive log of 73 plant species, including location and invasive status details, to support data analysis and decision-making processes
- **Statistically estimated** an increase in native groundcover of 170% through invasive removal efforts.

TECHNICAL SKILLS

Programming & Reproducible Research: R, Python, Git/GitHub, RMarkdown, documentation

Data Analysis & Modeling: Statistical modeling, regression, predictive and ensemble models, time series analysis

Data Wrangling & QA/QC: Multi-source data integration, feature engineering, data validation, reproducible workflows

Visualization & Decision Support: ggplot2, interactive dashboards, spatial and temporal analysis, stakeholder-facing reporting

Tools & Libraries: tidyverse, pandas, scikit-learn, TensorFlow, ArcGIS