

# Ian Morris-Sibaja

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## EDUCATION

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**Master of Environmental Data Science**, 4.00 GPA (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

Leadership/Involvement: Assessing Range Shifts of Coastal Species to Inform Conservation in California's Biogeographic Transition Zones – Capstone Project (June 2025)

**Bachelor of Science in Biology** (June 2022)

**University of California, Los Angeles**

Highlighted Coursework: Applied Data Science, Data Structures and Algorithms

Honors/Awards: Departmental Honors, Specialization in Computing

## TECHNICAL SKILLS

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**Data Visualization, Machine Learning, Data Preparation, Statistical Analysis**

**Programming Languages**: R, Python, Git/GitHub, ArcGIS

## PROJECTS

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

- **Applied** advanced statistical modeling (GAMs, CDFs) and ensemble species distribution models in R to analyze 24 years of intertidal biodiversity/climate data, projecting range shifts to 2050 under SSP 4.5.
- **Designed and launched** the [California Ranges of Intertidal Species Portal \(CRISP\)](#), an interactive web app on The Nature Conservancy's Dangermond Geospatial Hub, enhancing accessibility and visualization of conservation-relevant data.
- **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** large-scale environmental datasets by building a pipeline that integrated 9,000+ flowering records (GBIF) and 6,000 climate observations (ACIS) spanning 51 years, applying data wrangling, cleaning, and feature engineering to prepare them for analysis.
- **Applied regression modeling and statistical analysis** (p-values, R<sup>2</sup>, coefficients) to quantify the relationship between temperature, precipitation, and flowering phenology in regional climate 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 — findings with implications for biodiversity resilience and ecosystem management.

## EXPERIENCE

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**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.

**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