

Research Portfolio

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Human-Centered Studies

Seattle, WA
June 2025

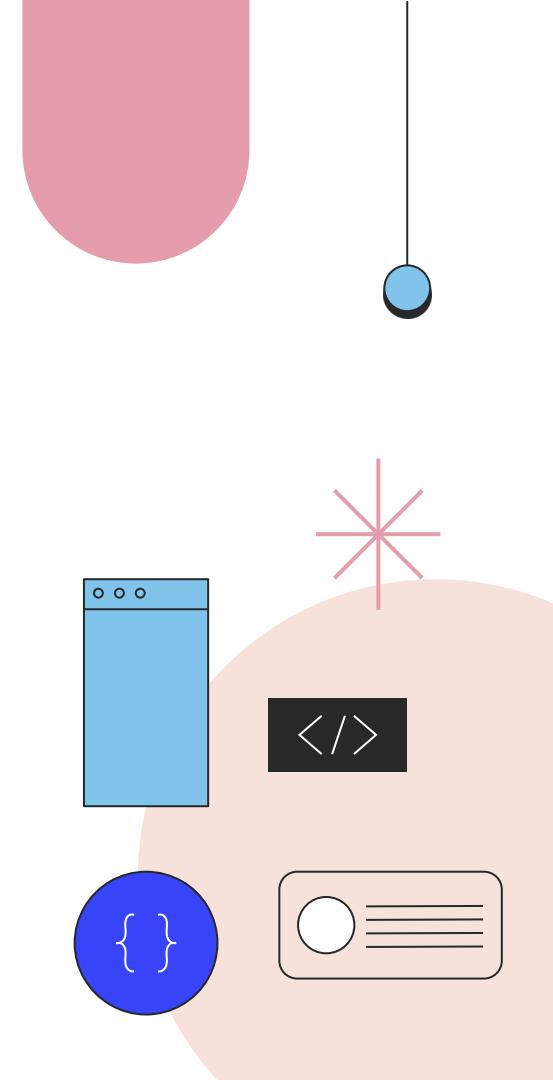
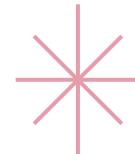
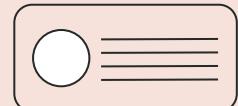
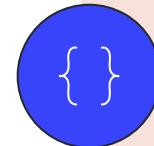
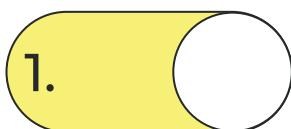
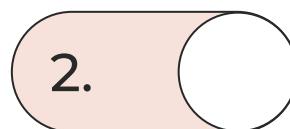


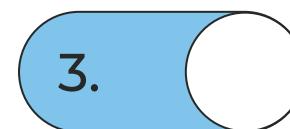
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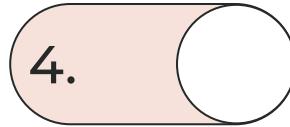
1.
ABOUT ME



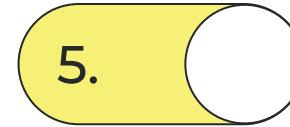
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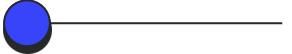
1.

ABOUT ME

I am a **Mixed-Methods Researcher** with **Ph.D. in Anthropology** specializing in experimental design, project management, and stakeholder collaboration.

I have demonstrated success in analytical research, mentoring teams, and adapting complex findings for non-technical audiences.

Seeking to apply analytical and communication expertise to support strategic businesses and build high-performing teams.



My key skills:

Leadership

I've led multi-disciplinary teams of 15+ people in the field and mentored students in the laboratory and classroom.

Organization

Prioritize tasks according to objectives and deadlines.

Problem-solving

I solve difficult issues using creative solutions

Technical skill

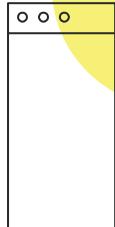
I'm an expert in experimental design, grant writing, scientific methods, and archival ethnographic research.

Communications

I can effectively convey complex ideas and concepts to non-technical audiences, students, and professionals.

Collaboration

Teamwork and collaboration is essential for creating holistic experiences and supporting positive project outcomes.





2.

Research Methods

As a Mixed-Methods Researcher with a background in Anthropology, I use both qualitative and quantitative methods to enhance project goals. Here are some methods I've used:

**Experimental
Design**

**Statistics
(ANOVA, T-tests)**

**GIS
Mapping**

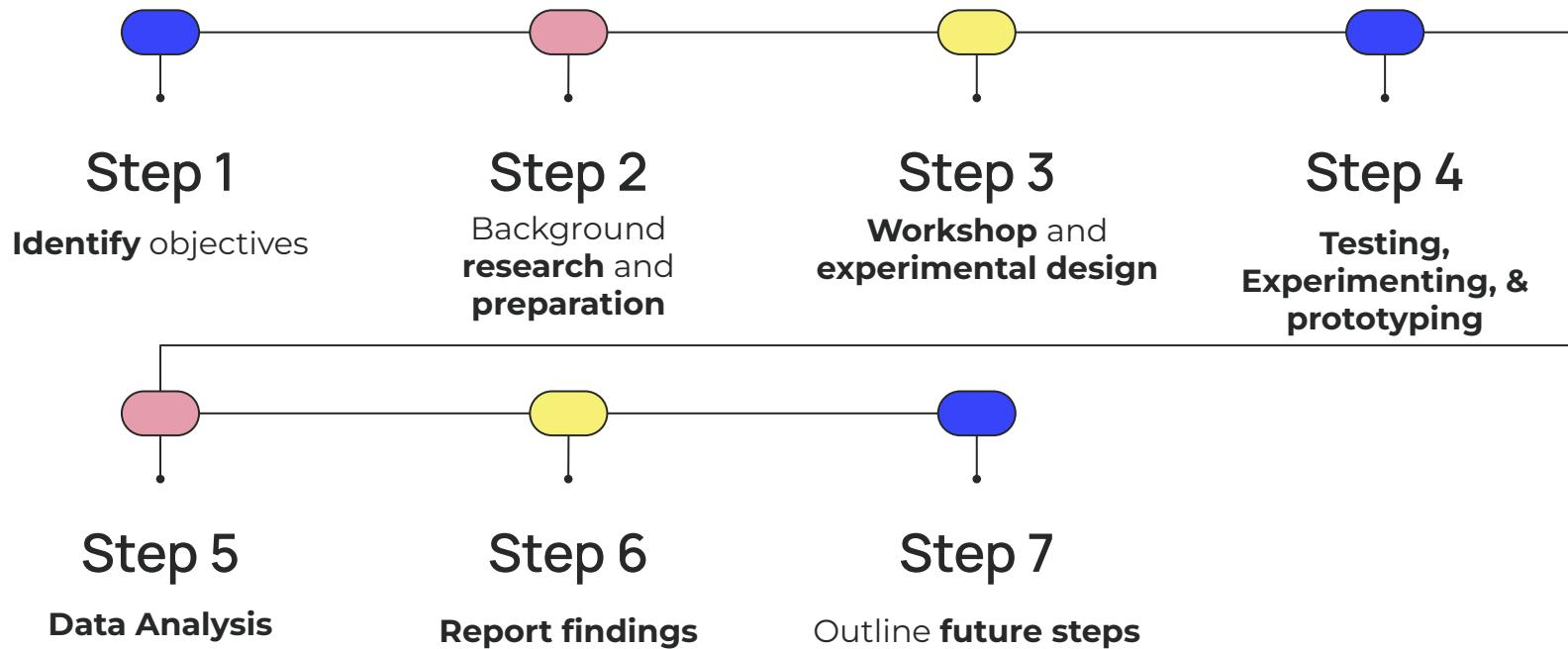
**Archival
Research**

**Data
Visualization
(Rstudio, Python,
PPT)**

**Meta-data
Analysis**

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My Research Process:



A photograph of a man standing in a dry, hilly landscape. He is wearing a wide-brimmed hat and a light-colored button-down shirt. He is standing next to two llamas: a brown one on his left and a white one on his right. In the background, there are stone walls and a brick building. The overall scene suggests a rural or pastoral setting.

CASE STUDY 1

**Big Data & Archival Research:
Human and animal interactions in South America**

Project Overview

Exploring human-animal-environmental interactions to understand long- and short-term changes in herding strategies and identify underlying patterns.

Background

- Herding practices evolve over time as states expand or collapse and landscape changes.

Objectives

- Reconstruct animal diet and mobility to understand how they were herded in the past.
- Compare to ethnographic studies on animal practices in Peru and Bolivia.

Outcomes

- Access to herding areas were impacted by extreme climatic and political conditions.
- Andean pastoral communities are resilient and adaptive, grounded in generations of traditional knowledge.



Trabajo / zarapuci nacimienta yacachaymita, abel, incaraymi quilla / labrador
pachaca aratus / abel, incaralimi



Photo taken while conducting field work.

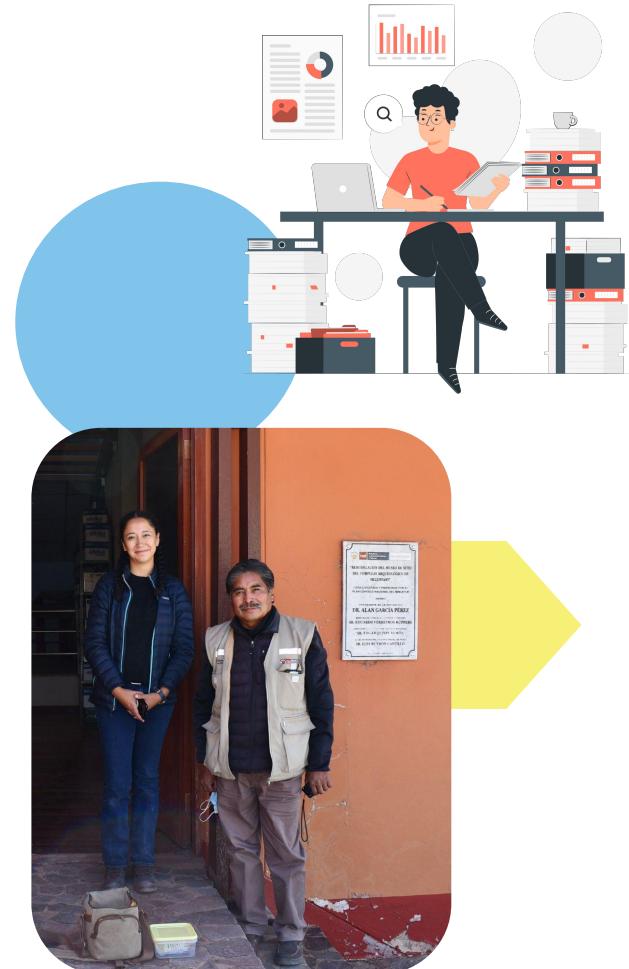
Big Data & Archival Analysis

Research Setup:

- Created a database of published and newly analyzed camelid carbon and nitrogen isotope values ($n = 504$) to reconstruct diet and mobility patterns.
- Performed in-depth archival research, analyzing ethnographies and historical documents to gain insights into human behavior, social systems, and lived experiences over time.
- Statistical tests were performed using SPSS to assess patterns among differing sites, chronologies, settlement pattern, and political affiliation.

Data Synthesis & Reporting

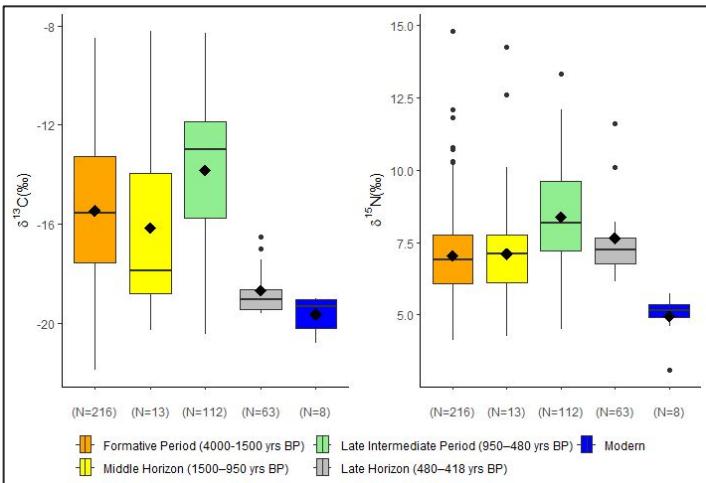
- Designed a database of modern and archaeological plant types ($n = 292$) in South America by ecological zones, altitude, and photosynthetic pathway.
- Collaborated with stakeholders.
- Communicated findings to institution, funding agencies, and stakeholders.



Case study 1: Big Data & Archival research

Data Visualization & Reporting:

- Mapped each site using ArcGIS based on settlement type and elevation.
- Created graphs and tables using Excel and Rstudio.
- Conducted statistical analyses including T-tests, summary statistics, Kruskal-Wallis H tests, and Mann Whitney U tests.

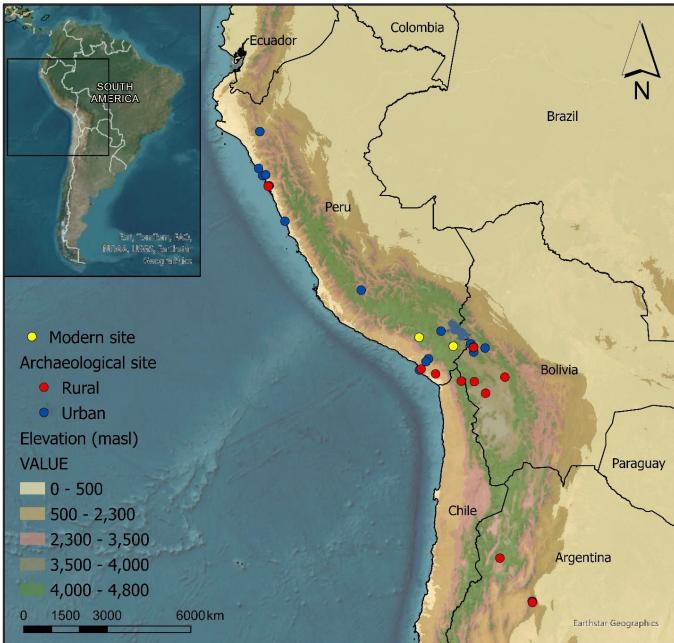


Graph created using Rstudio highlighting changes over time.

Ecological Zone	Elevation (masl)	N of samples	N of sites	Min $\delta^{13}\text{C}$ (‰)	Max $\delta^{13}\text{C}$ (‰)	Mean $\delta^{13}\text{C}$ (‰)	SD $\delta^{13}\text{C}$ (‰)	Min $\delta^{15}\text{N}$ (‰)	Max $\delta^{15}\text{N}$ (‰)	Mean $\delta^{15}\text{N}$ (‰)	SD $\delta^{15}\text{N}$ (‰)
Chala	0-500	321	14	-21.9	-8.3	-15.0	2.9	4.1	14.9	7.6	1.9
Yunga	500-2300	65	7	-20.4	-9.5	-14.1	3.0	2.4	10.3	5.6	1.7
Quechua	2300-3500	67	6	-20.2	-8.2	-15.1	3.7	4.1	14.3	6.9	1.6
Suni	3500-4000	34	8	-20.3	-15.2	-18.3	1.3	4.8	11.9	8.5	1.9
Puna	4000+	17	3	-20.8	-15.2	-18.6	1.4	3.1	10.1	6.8	2.1

Summary statistics using SPSS and Excel

Map created using ArcGIS Pro including elevation (masl) and settlement type.





CASE STUDY 2

Scientific Research:
A Deep Dive into Herding Practices in the Ancient Andes

Project Overview

Led a collaborative research project focused on understanding animal management practices in ancient communities in Bolivia and Peru.

Background

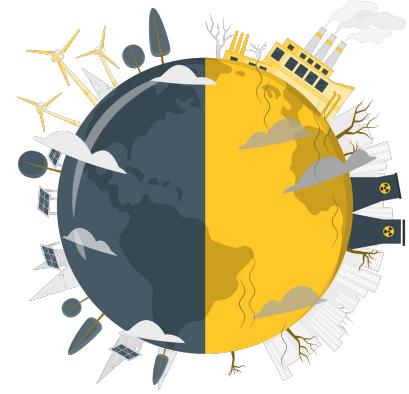
- Herding practices evolve over time as states expand or collapse and as the environment changes.

Objectives

- Using scientific methods to study patterns in how animals were raised and moved across regions during state expansion.

Outcomes

- Access to animal grazing areas was shaped by both harsh climate events and interactions with neighboring communities.
- Andean pastoral communities engaged in animal management strategies that are no longer practiced today.



Case study 2: Scientific research

Research setup:

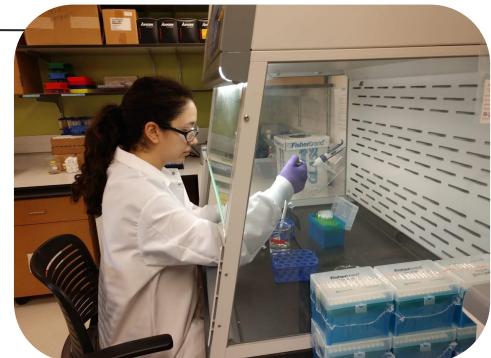
Experimental Design

- Designed the research approach in collaboration with archaeologists and stakeholders, ensuring the study aligned with cultural and scientific goals.
- Acted as project manager, coordinating communication and tasks across a cross-functional team based in the U.S. and Bolivia. Including:
 - Keck Carbon Cycle AMS Facility at UC Irvine
 - Fike Lab at Washington University in St. Louis
 - W.M. Keck Isotope Laboratory at the UC Santa Cruz
 - Collasuyo Archaeological Research Institute (CARI)



Data Analysis

- I conducted scientific methods on ancient camelid animal remains ($n = 165$) from 14 specimens.
- Conducted similar experiments with modern comparative samples ($n = 82$) from 5 specimens.
- Statistical and data analysis were performed using SPSS, Rstudio, and Excel.



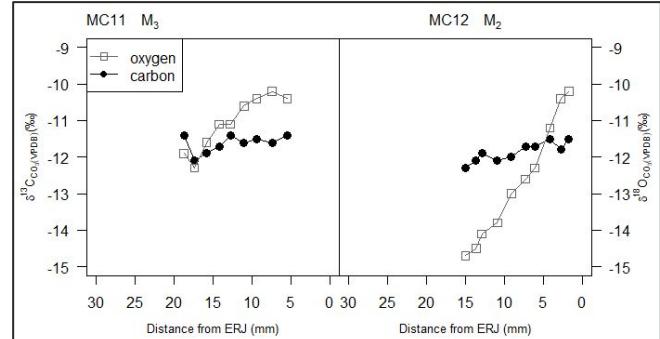
Key Insights:

- Herders from these highland communities engaged in **traditional animal management practices** by utilizing their **knowledge of the surrounding landscape** for grazing their herds in preferred pastures.
- **Qualitative and quantitative data** are both useful for fully understanding human behaviors and motivations.
- **Sociopolitical and environmental factors** play a major role in daily activities.
- **Cross-functional collaboration** and **holistic feedback** are helpful for driving successful projects.

Future steps:

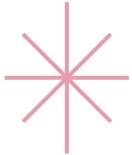
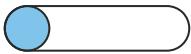
- Publish results in both English and Spanish to **disseminate findings**.
- Future project ideas:
 - Conducting surveys and in-depth interviews with herders to document changes over time.

Photo taken of present-day landscape in Peru



Scientific diagram using Rstudio: Reconstruction of animal diet and mobility over time using biogeochemistry methods.





Thank You!

Do you have any questions?

Contact me:

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