What Is This Class???

HES 505 Fall 2025: Session 1

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Welcome to Space!!

Today's Plan

- Introductions
- What can we do with spatial data?
- Course logistics and resources
- Testing out RStudio and GitHub Classroom

Introductions

About you?

- Your preferred pronouns
- Where are you from?
- What do you like most about Boise?
- What do you miss most about "home"?
- What is your research?

About Me

- What I do
- My path to this point
- Why I teach this course

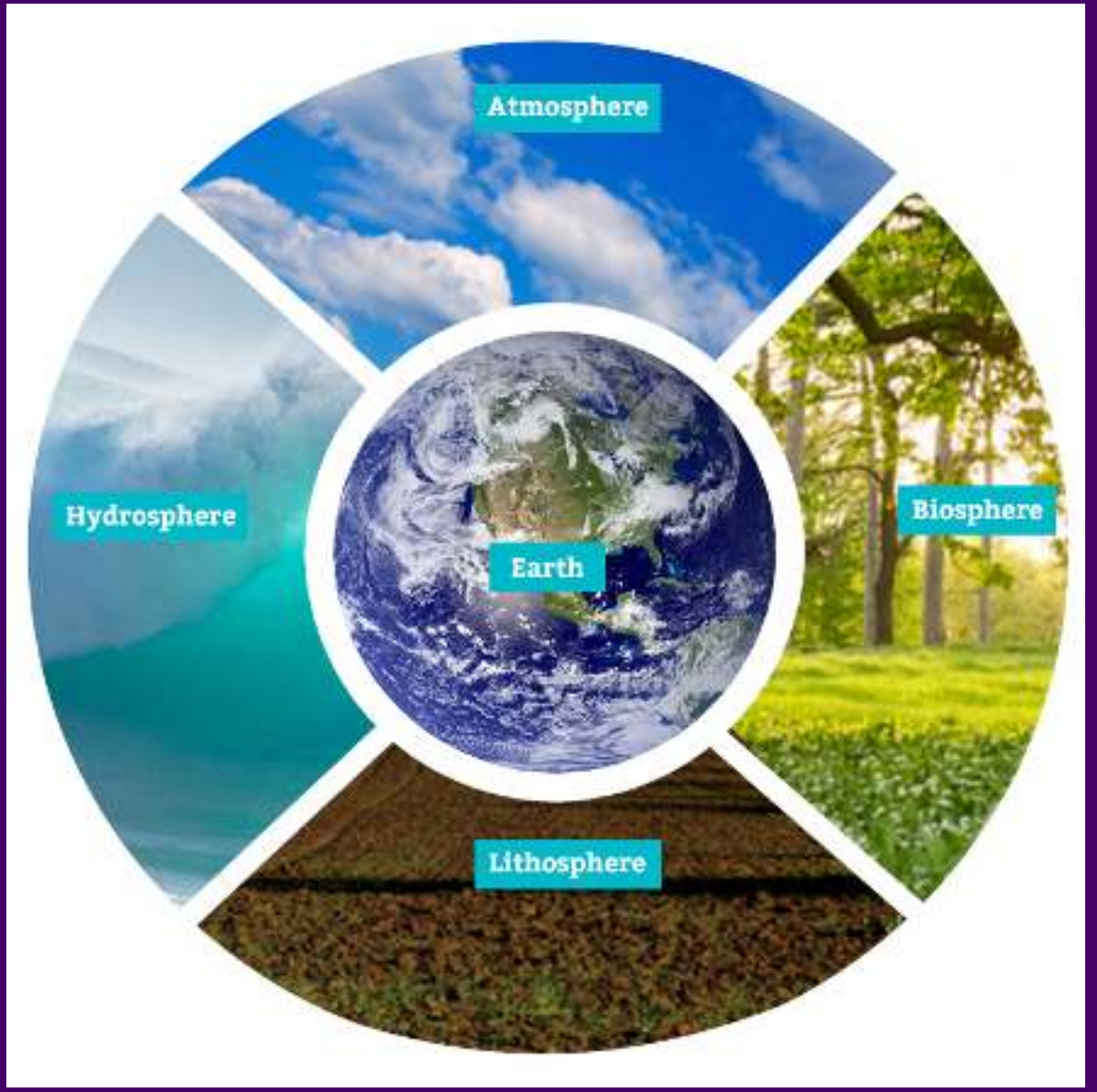

What can we do with spatial data?

What is geography

- **Geo**: land, earth, terrain
- **Graph**: writing, discourse
- Tuan: **Space** (extent) and **Place** (location)
- Analysis of the effects of extent and location on events or features

Five Themes in Geography

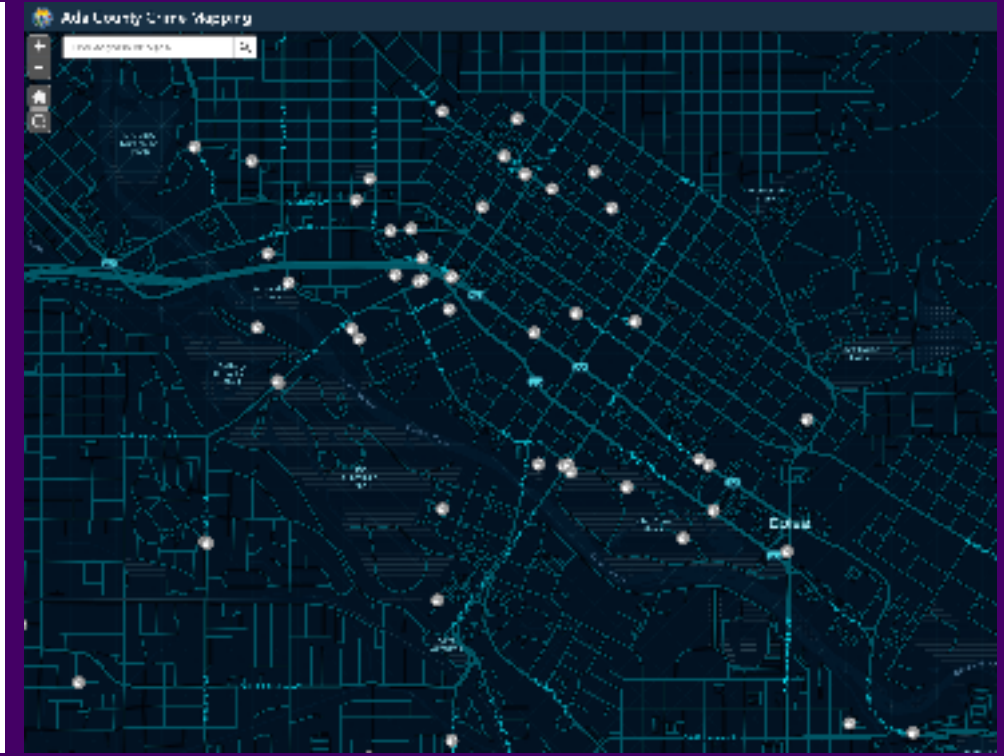
- Location
- Place
- Region
- Movement
- Human-Environment Interaction



WGBH Educational Foundation

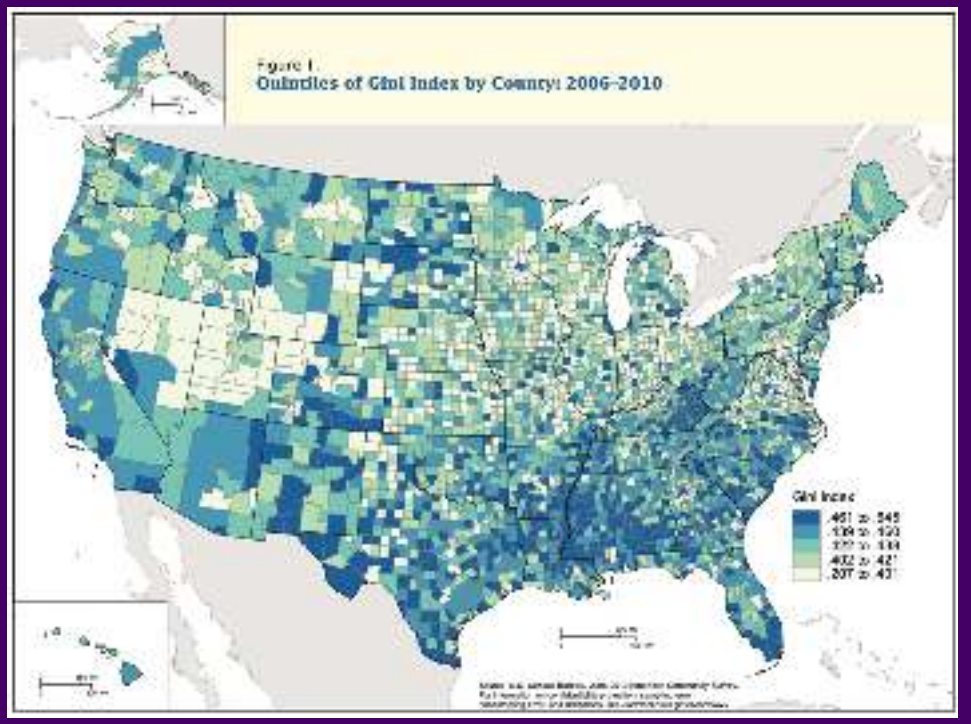
Location

The place (on Earth) of a particular geographic feature



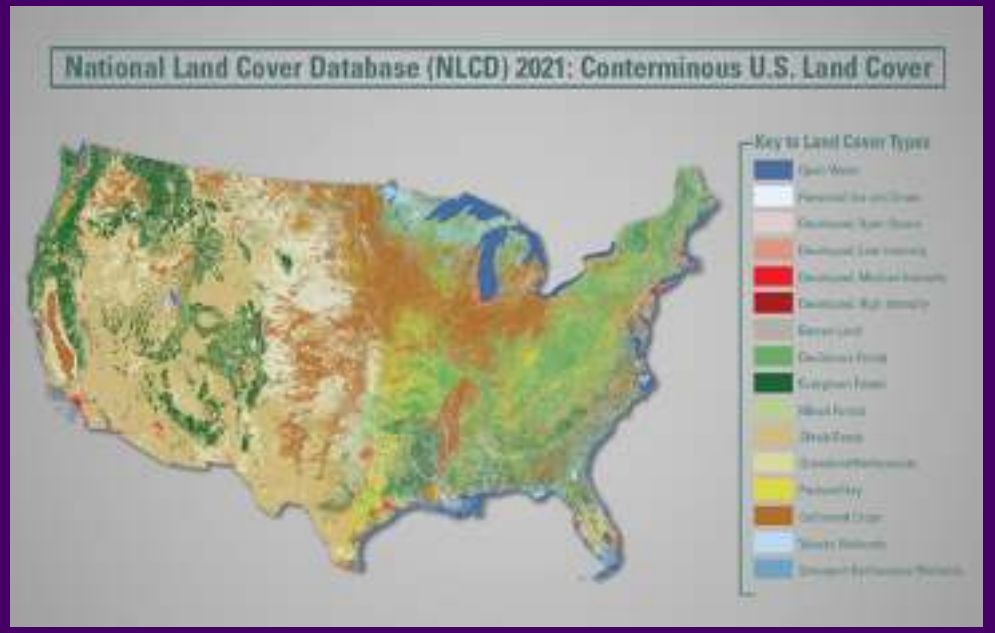
Place

What is a location *like*?



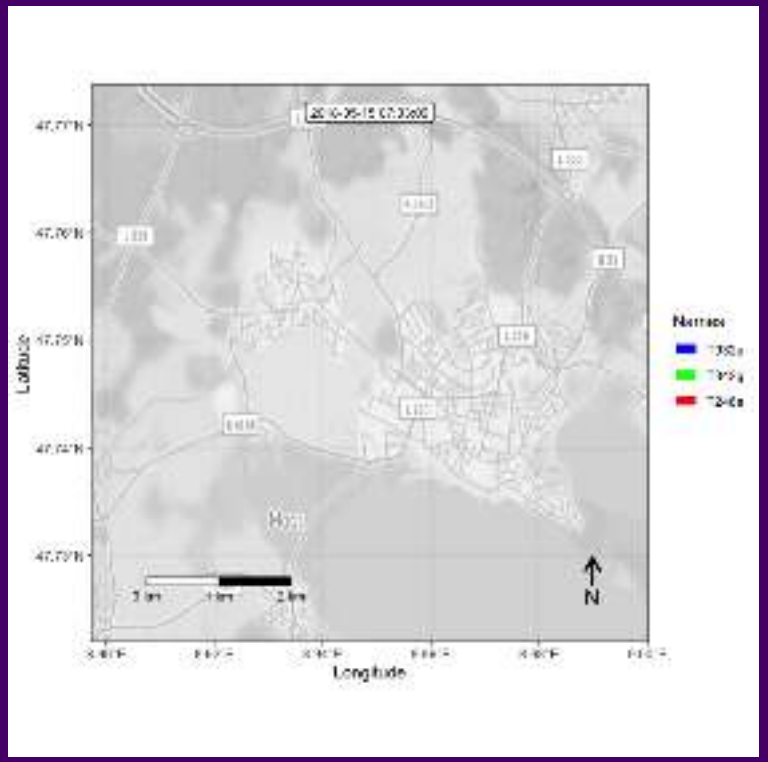
Region

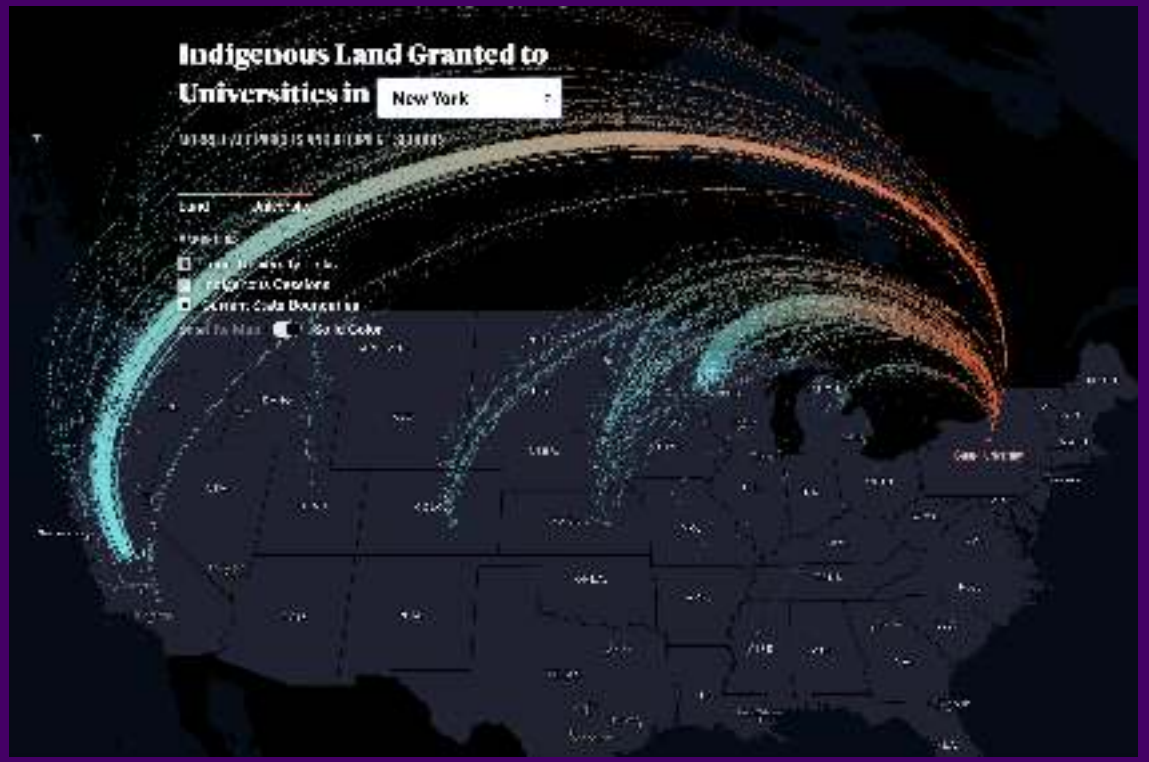
What attributes to different geographies share? What distinguishes them?



Movement

How do genes, individuals, populations, ideas, goods, etc traverse the landscape.





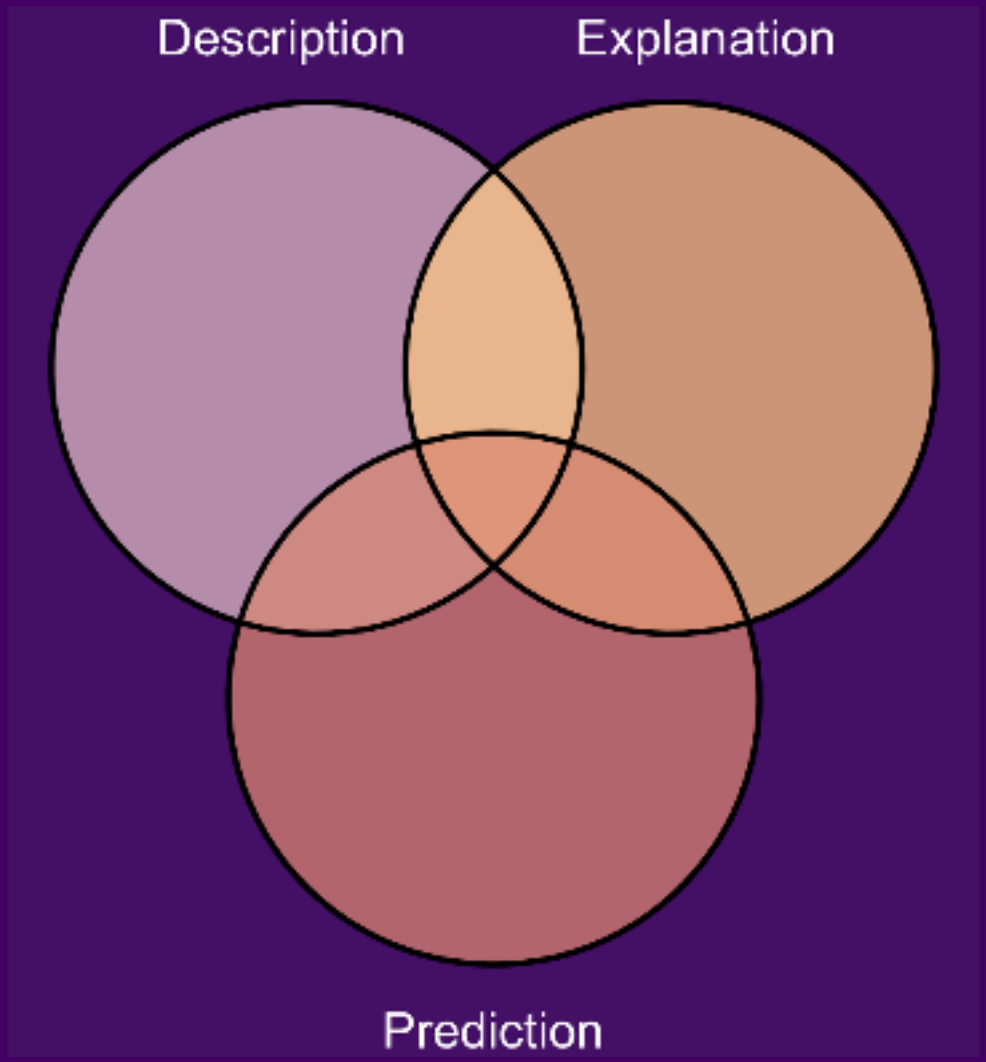
Human-Environment Interactions

How do people relate to and change the physical world to meet their needs?

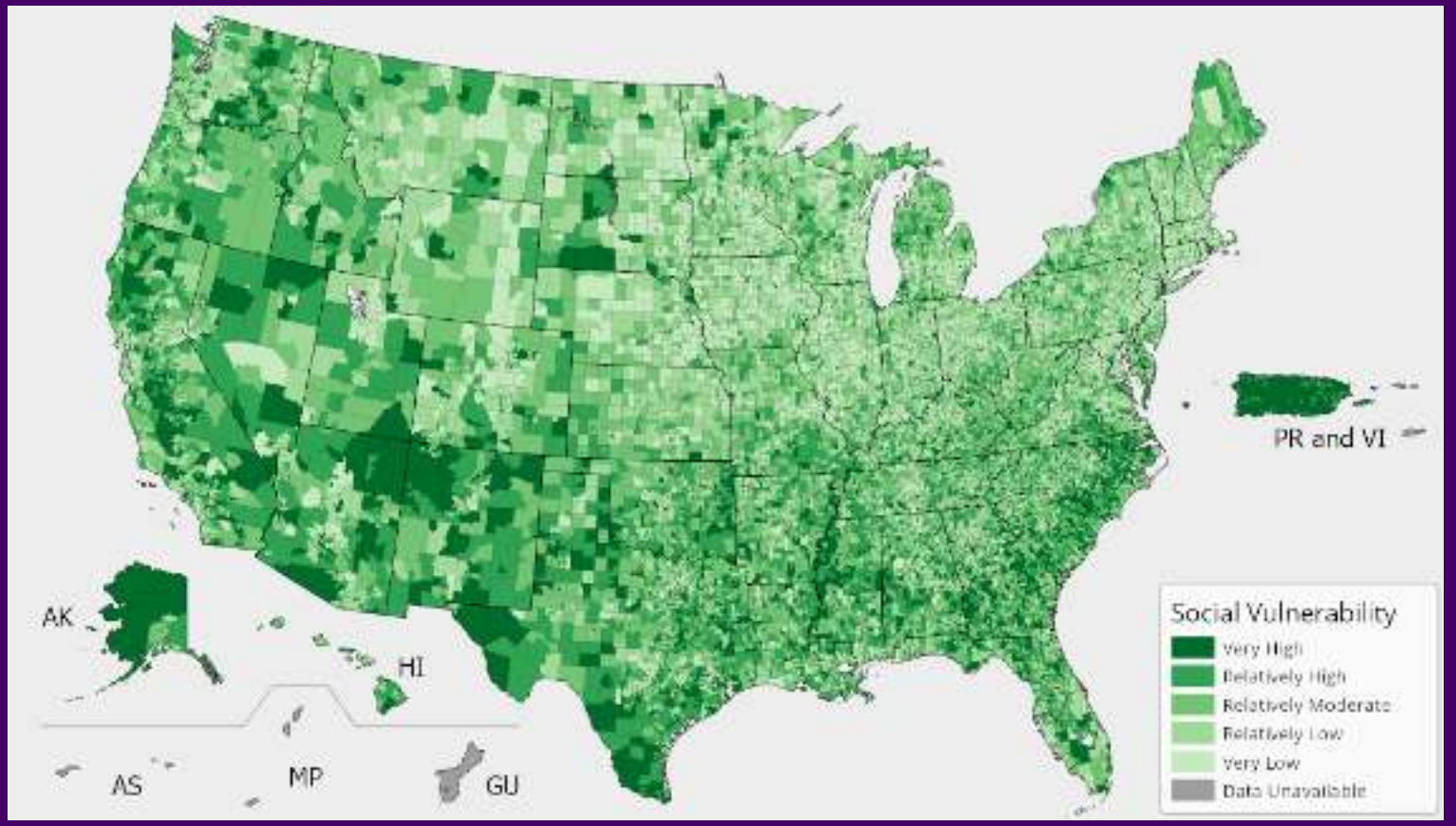
Towards *quantitative* spatial analysis

> ‘everything is usually related to all else but those which are near to each other are more related when compared to those that are further away’.
> Waldo Tobler

3 "Faces" of Analysis



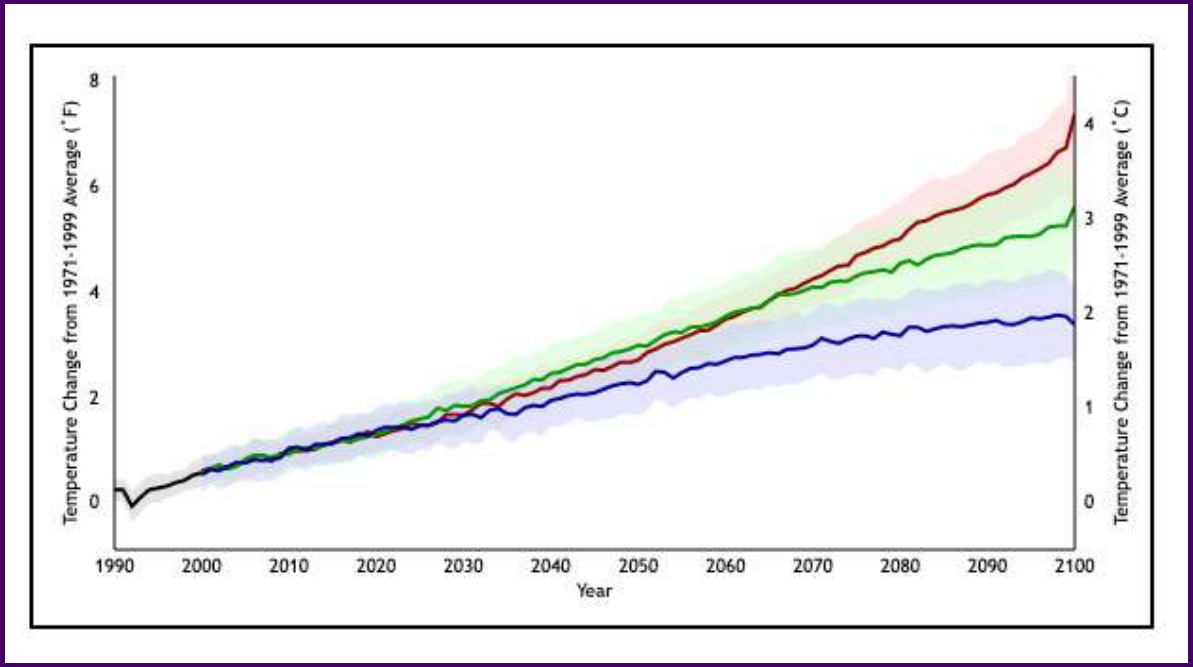
Description



Explanation and Inference

- **Cognitive Description**: collection ordering and classification of data
- **Cause and Effect**: design-based or model-based testing of the factors that give rise to geographic distributions
- **Systems Analysis**: describes the entire complex set of interactions that structure an activity

Prediction



- Extend description or explanation into unmeasured space
- Stationarity: the rules governing a process do not *drift* over space-time

Class Details

Logistics

- Meet on Mondays and Wednesdays
- ~40 min lecture, 30 min practice
- 5 major sections
- A note about readings

"Office Hours" immediately following class

Course Webpage

https://isdrfall25.classes.spaceslab.com/

- Syllabus
- Schedule
- Lectures
- Assignments
- Resources

Assignments

Check out the syllabus for more on grading!

- **Self-reflections** (2x)
  - Your goals for the course
  - Evaluation criteria
- **In-class exercises** (30x)
  - Problem solving
  - Reproducible workflows
  - Muscle memory
- **Homework Assignments** (5x)
  - Integrate skills from the section
  - Practice visualization
  - Build version control habits
- **Code Revisions** (5x)
  - Common issues
  - More extensive feedback
- **Final project** (1st draft, final draft): Practice a full analysis workflow; Integrate analysis & visuals to tell a story

Wrapup

Checking in

1. What can I clarify about the course?


A ORBIS TERRARUM
MERIDIANO TABB,
DELINEATIO SINGULARI
RUDOLPHI
RATIONE ACCOMMOD
ASTRONOMICARUM
LEOPOLDO
ROMANORUM
IMPERATO
R I. S. A
devotissime
D D D
ME PRES
SAM TENEBRIS
REVOCAT
LEOPOLDUS
IN AURAS
SEPTEN
AMERI
CA
SEPTEN
TRIONALIS
SEPTENTRIO
MAR
DEL
NORT
HEMISPH.
HORÆ
AMERICA
MERIDIONALIS
OCEANUS
AETHIOPICUS
MAR DI
INDIA
TER
RA
AUSTRALIS
INCOGNITA
MERIDIES
LINEA EQUATORIS
ZIR
SEPTENT
PARS
OCEANUS
CHINENSIS
MAR DI
INDIA
GUINEA
IOANNE KEPPLERO MATHE
MATICO CAESAREO
PHILIPPUS ECKEBRECHT
MERIDI

End