



Join at
slido.com
#ucla

Web Development and GIS for Social Change

Critical Data for Transforming Civil Society

Albert S. Kochaphum
Week 1 | June 21st, 2021

How are you feeling?

006

Relaxed

CHILLIN

Peaceful

tired

Meh

excited!

Today's Agenda



Introductions



About me!

GIS + code = ftw

bikeclist



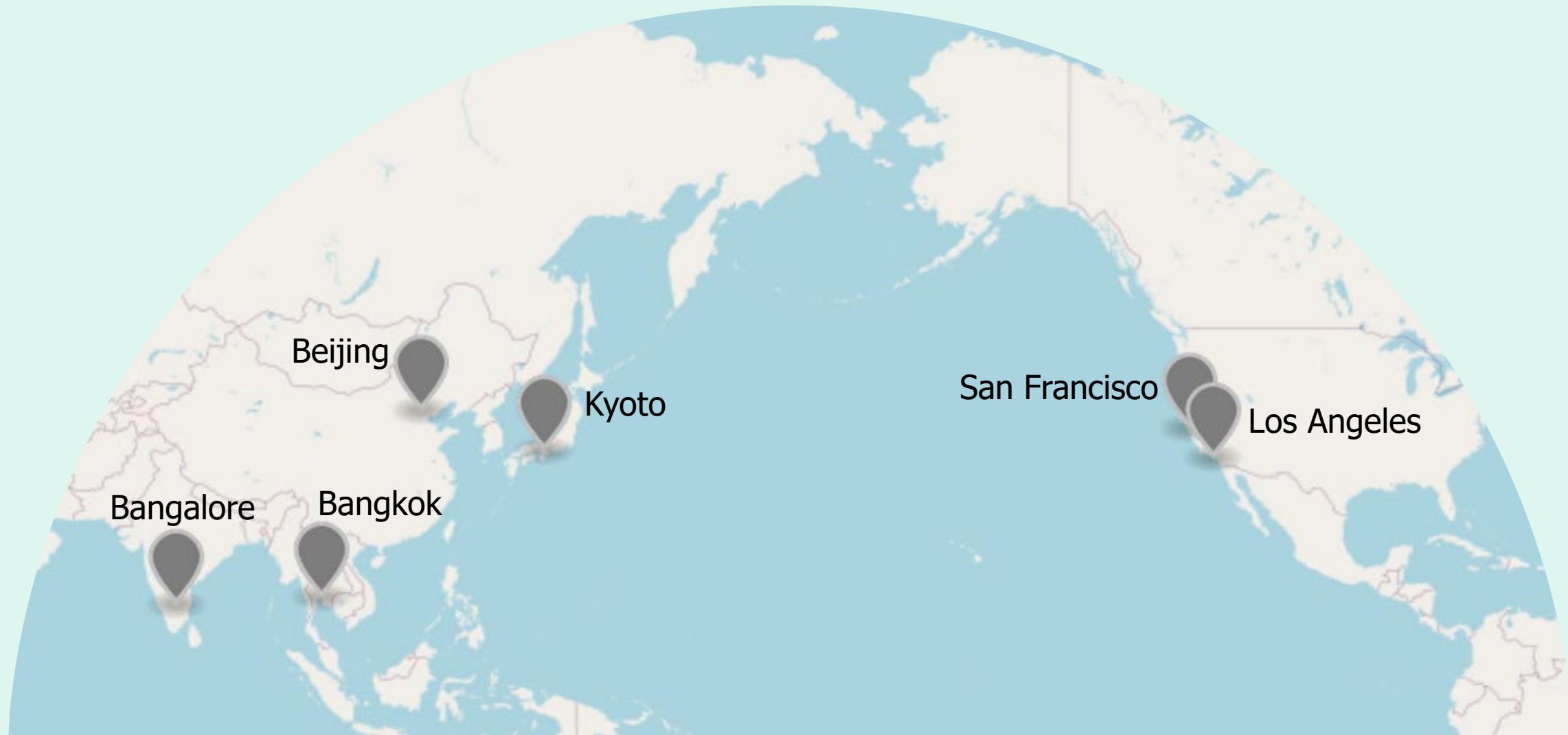
made in san francisco

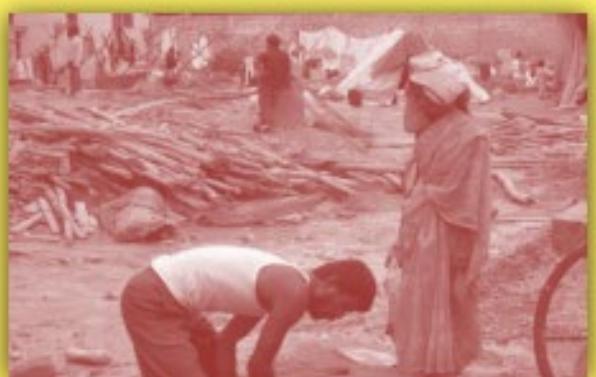
omg, climate change :(

wow! Much tarrible puns

can we haz
more social equity?

More about me











Jane Map

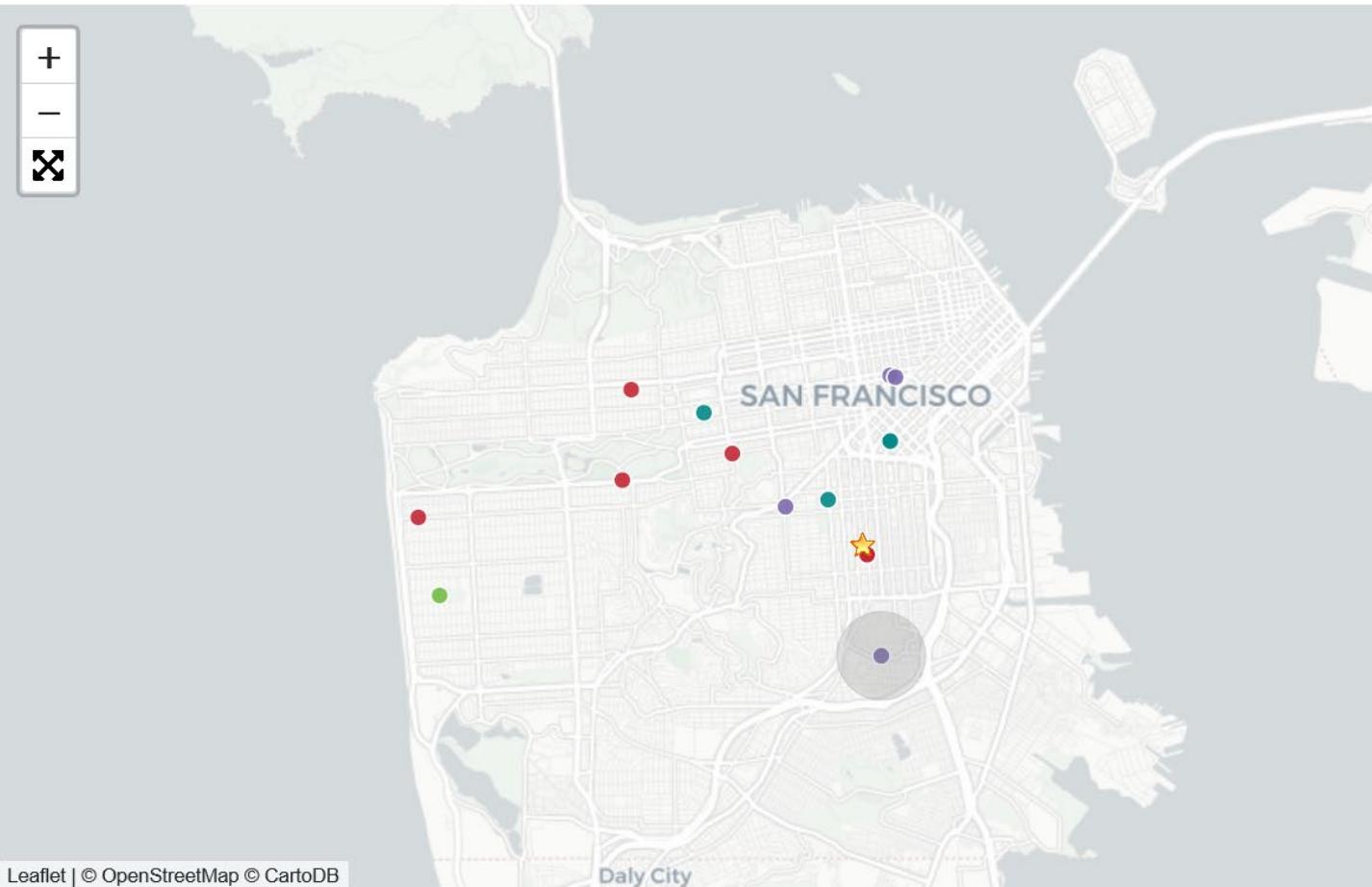
Let's get started on electing a progressive mayor for San Francisco.

f Share

t Tweet

Reddit

Host an Event



Leaflet | © OpenStreetMap © CartoDB

Search

BY ZIPCODE

SORT BY

ENTER ZIPCODE

Date Distance

Hide Filters

FILTER BY TYPE

★ Campaign Office

● Canvassing

● Meet

● Forum

● House Party

Mar 15 (Thu) 7:15 PM to 8:30 PM

[Bernal Heights Democratic Club Forum](#)

Forum

See Jane at the forum!

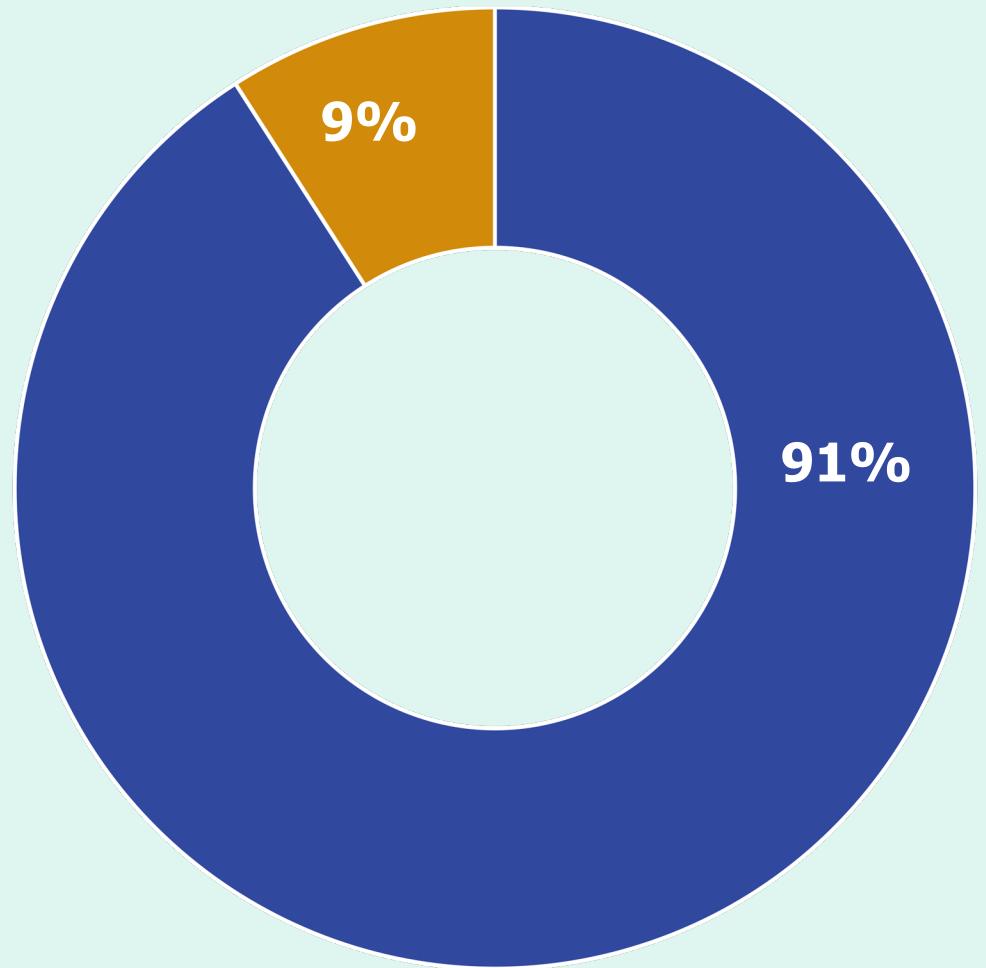
Hosted by [Bernal Heights Democratic Club](#) 515 Cortland Ave.
San Francisco, CA

RSVP

Get Directions

What type of web application we will be making!

Student Status



About you!

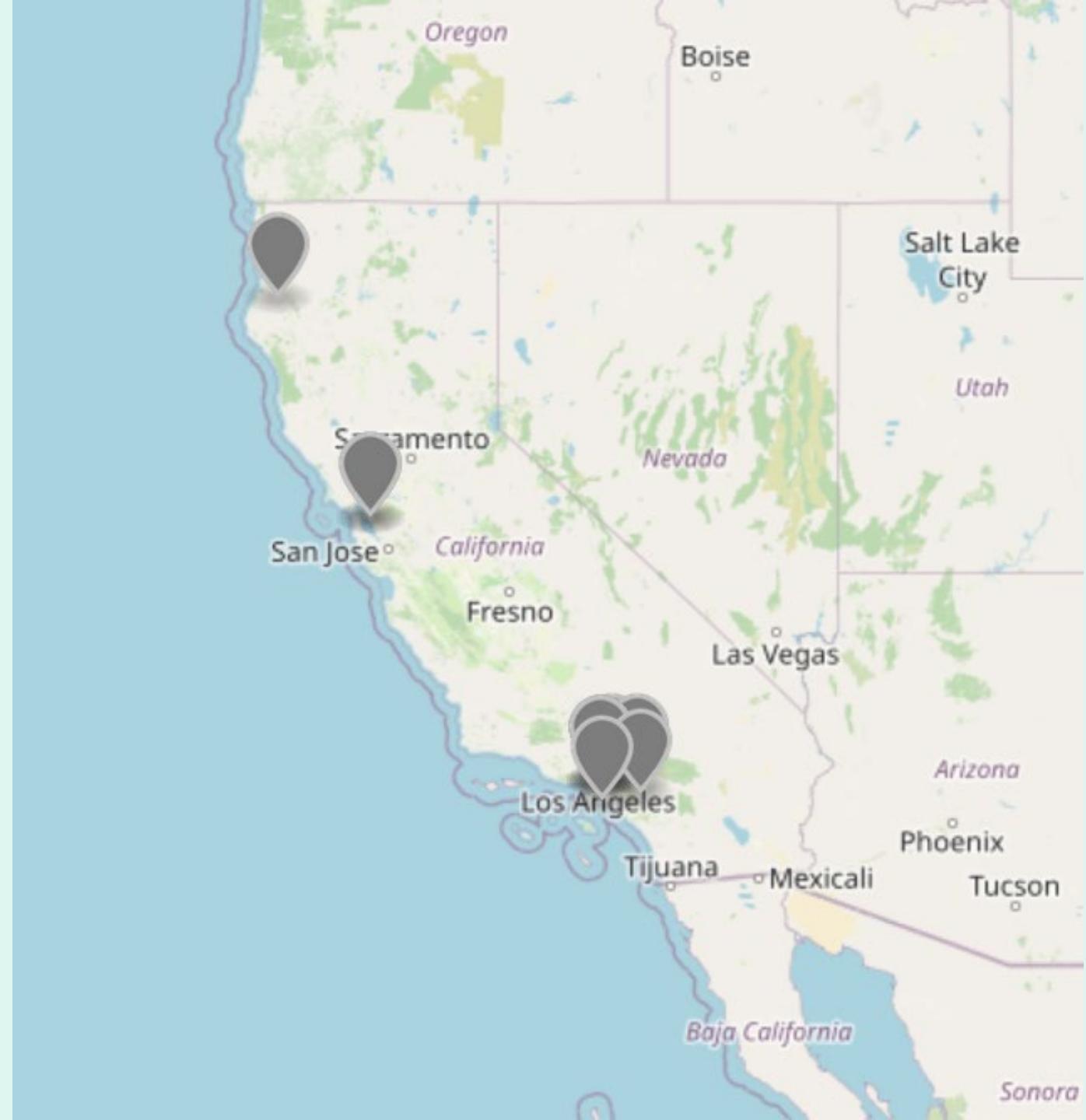


Graduate Students



Undergraduate Students

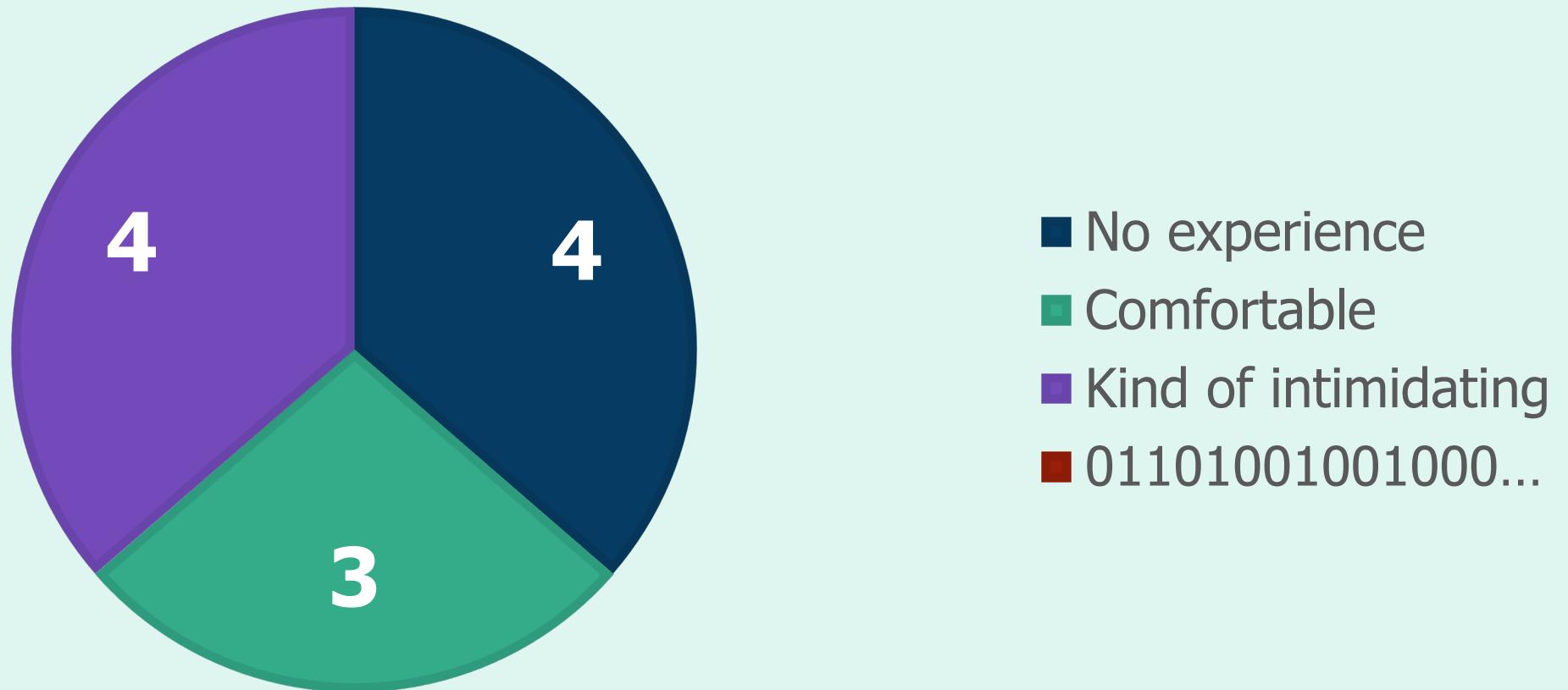
About you!



About you!

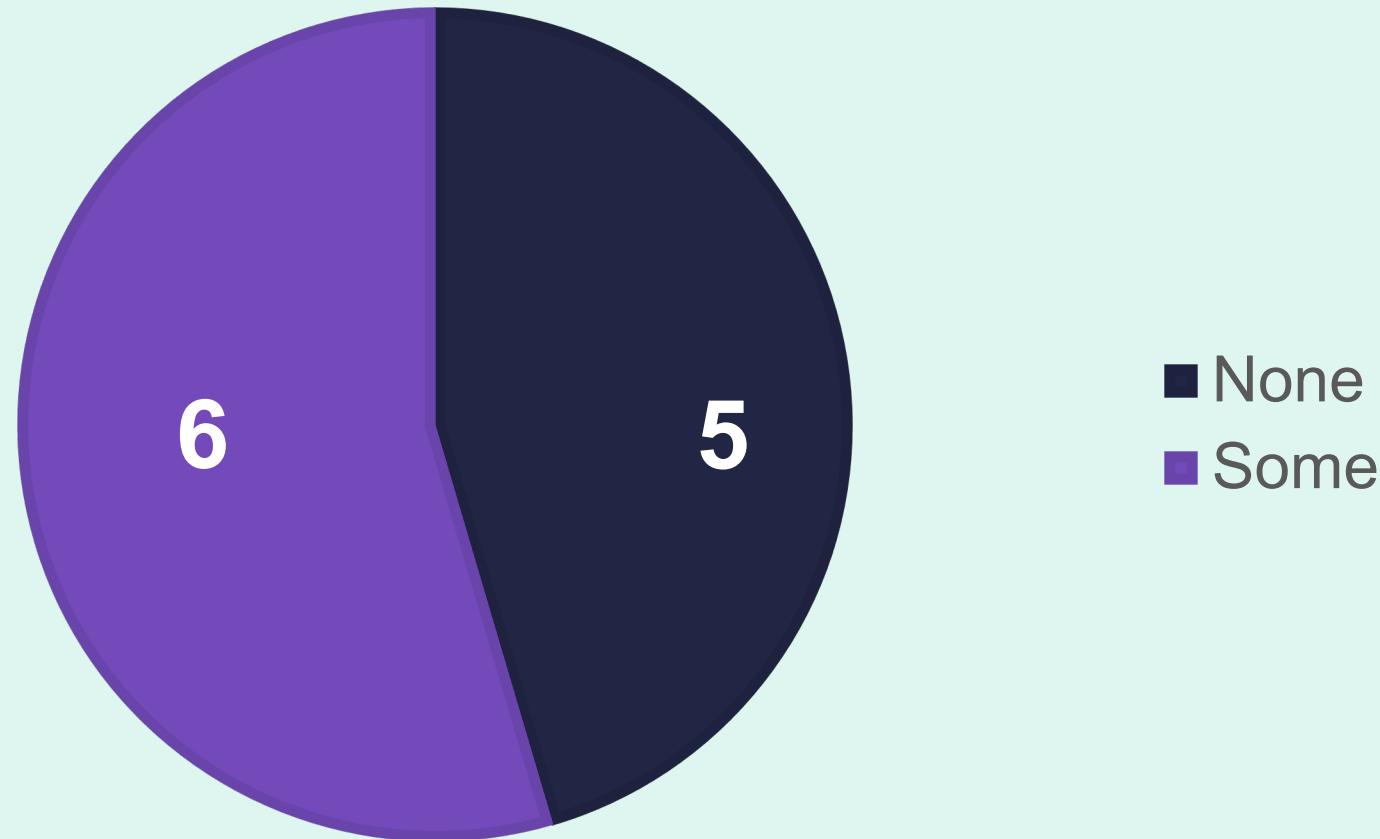
About you! Web Development

How comfortable are you with programming?



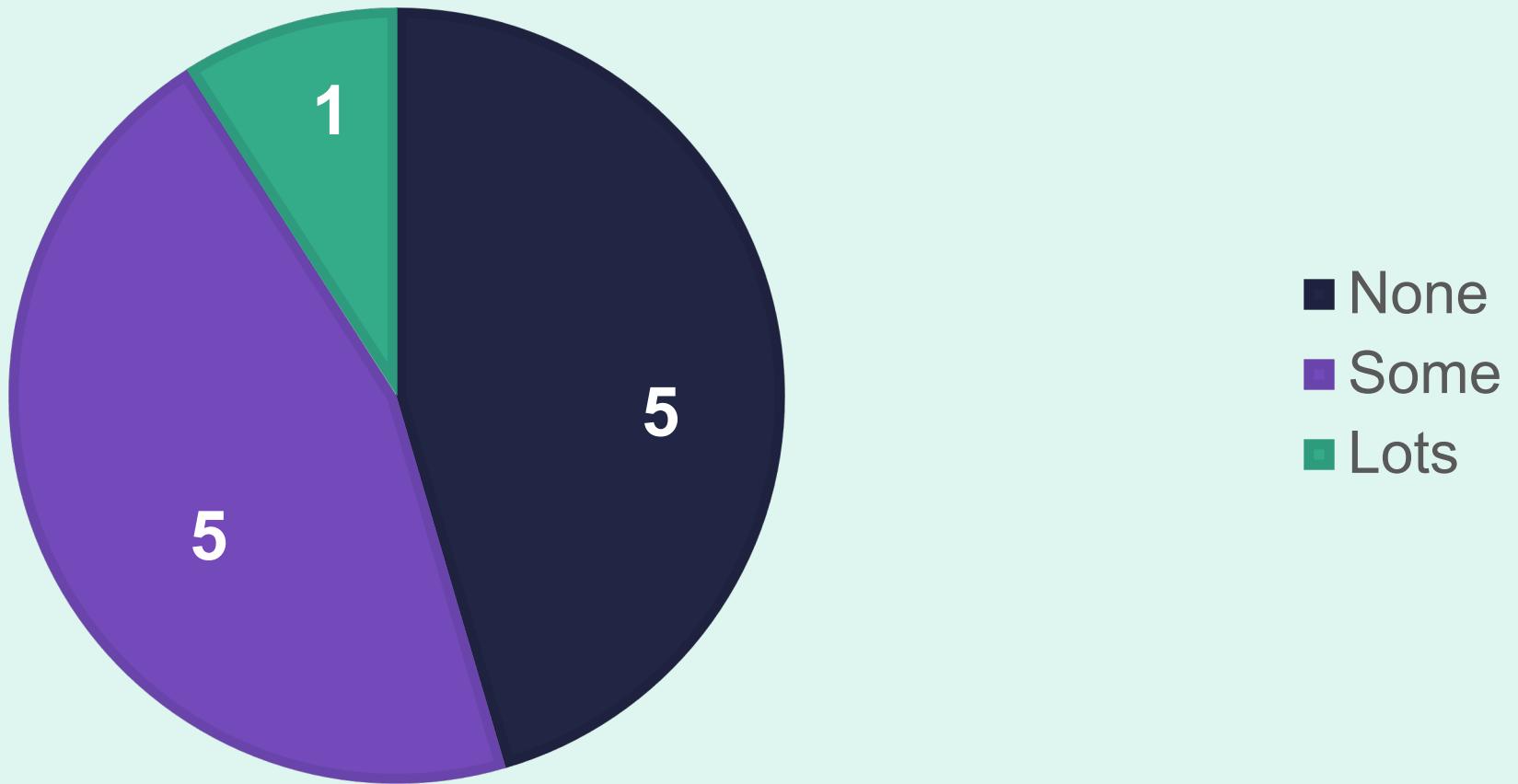
About you! GIS

What is your familiarity with GIS?



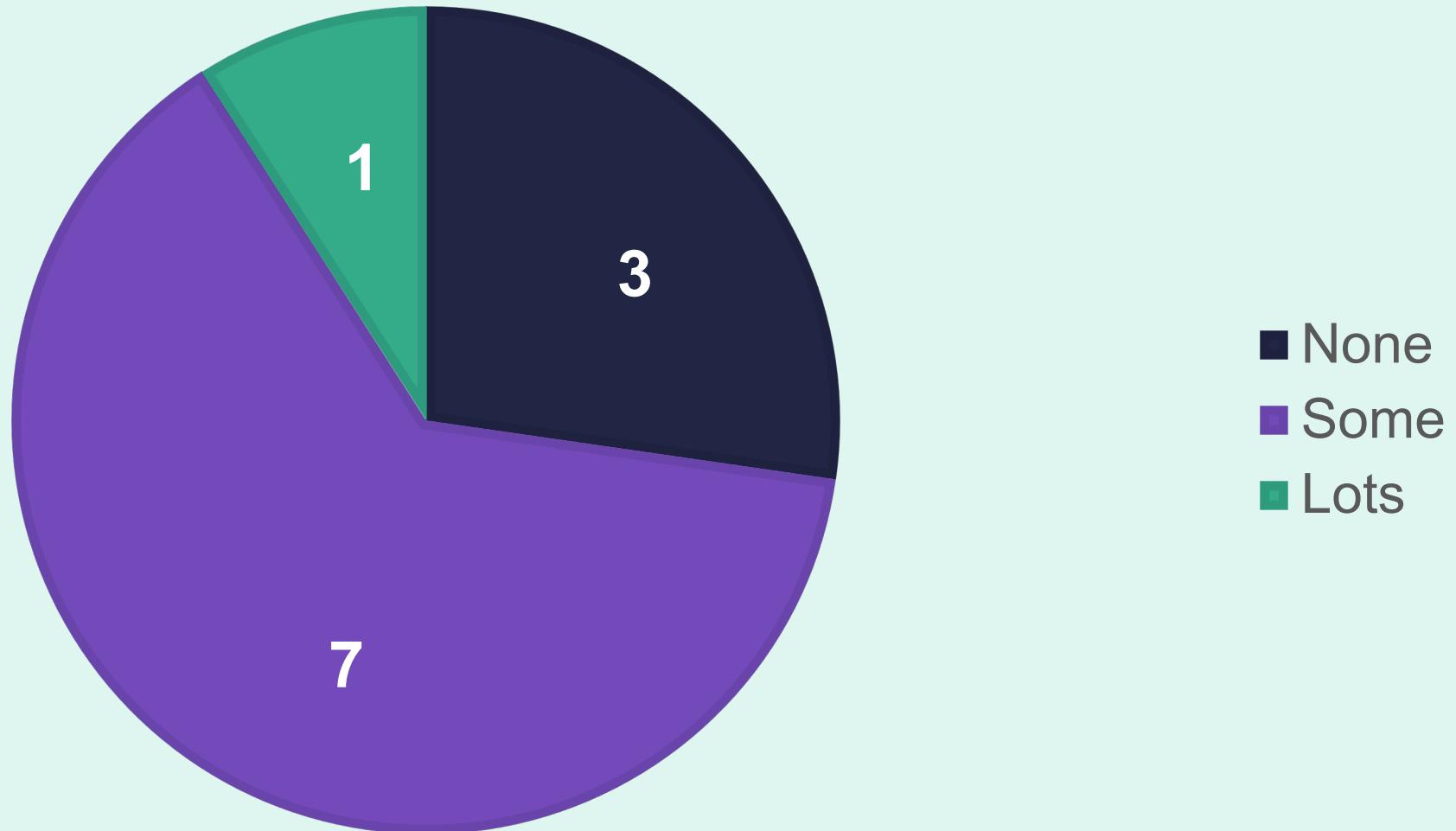
About you! Civil Society

What is your experience with civil society?



About you! Data

How familiar are you with cleaning data?



About you!

Please (**optionally**) introduce yourself with the following

Note: Let me know if you want to skip in the chat

Name

Major

Favorite Map

About the course

About the course

- No **GIS** experience needed
- No **coding** experience needed
- No **civil society** experience needed

Learning objectives

HTML

CSS

JavaScript



Acquire technical web development skills relevant to mapping for civil society



Apply an ethical framework to mapping projects

Design
Justice

Critical
Cartography

Technical learning objectives summarized:

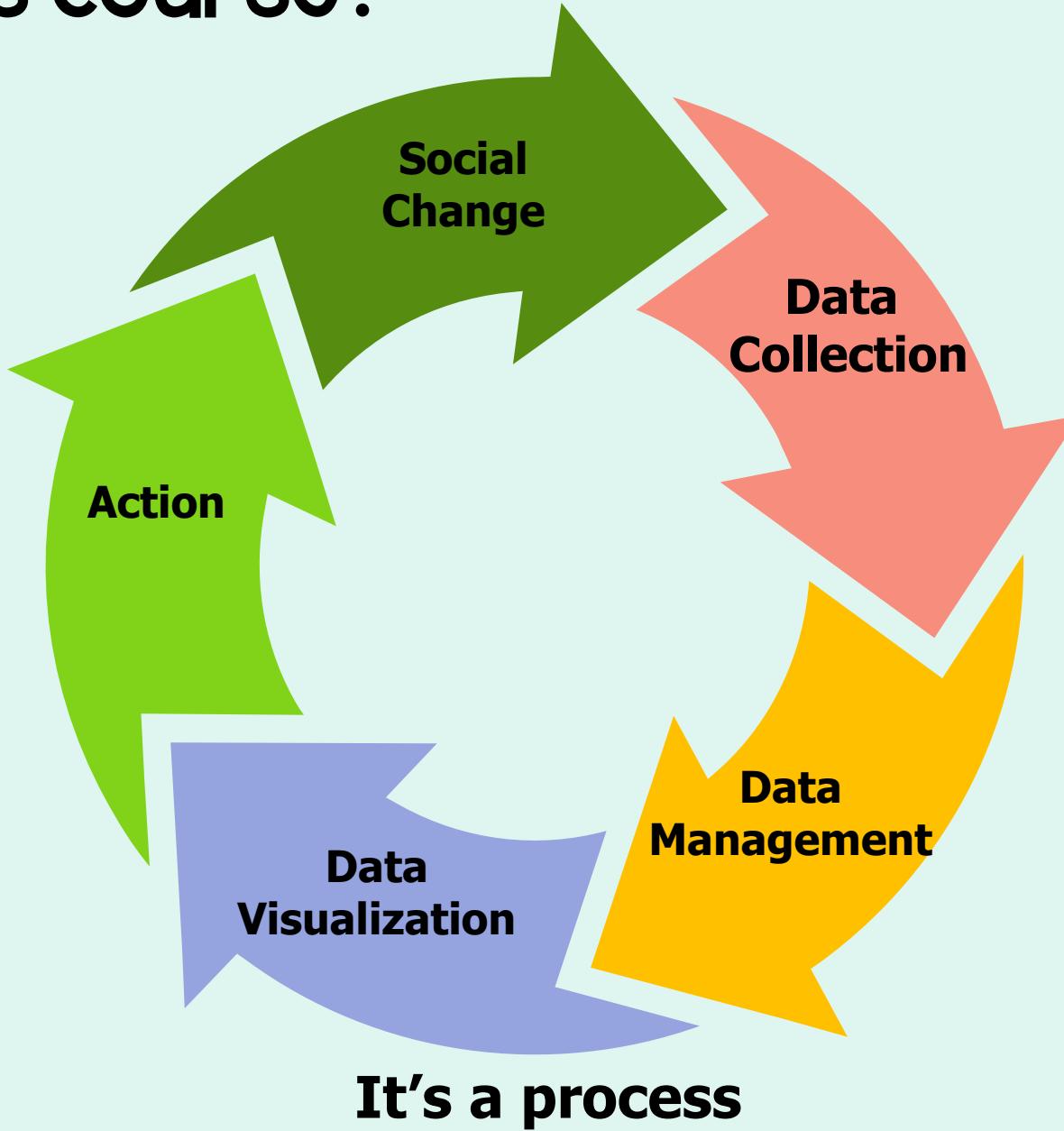
I HAVE NO IDEA WHAT I AM DOING





THIS ISN'T SO RUFF

What is this course?



What is this course?



Ethics



Mapping



Coding



Social Change

What is this course, really?



Example community project

Mapping COVID Hate Crimes in the US (Data from Stop AAPI Hate) SEE ALL OTHER HATE CRIMES REPORT INCIDENT ABOUT

CONTINENTAL USA ALASKA HAWAII

Cases per state

None
1-341
341-545
545-909
909-2728

Leaflet | © OpenStreetMap contributors

This map is maintained by the UCLA American Indian Studies Center under the Institute of American Cultures. To contact us, email aisc@ucla.edu.

COVID Hate Crimes in US

Word Cloud

aggressor contaminating
carwash student
situation super notice
flight talk
belt mexico
liar water doctor
church boarding bowl
elevator problem
would ballot course
attendant truth course
jihad water away
conveyor mother

Ethnicity

Gender

Type

* Please note that this data includes a small number of reports from witnesses of a different race than the victims.

www.hatecrimemap.com/covid

Example student group final project

What Does West LA Have to Say About Food Insecurity?

Where am I?: 90025

Services Used: Community Fridges

Reasons for Use: They were closer to my home and didn't require ID

Problems of Service:

Testimony Submission Time: 5/20/2021 14:18:34

Where am I?: 90024

Services Used: Food Banks, Food Pantries, Community Fridges, CalFresh

Reasons for Use:

Problems of Service: My application process took 3 months to go through, the entire time I was struggling to afford food. The process was complex and confusing and I lost track of all the documents and info I needed

Testimony Submission Time: 5/20/2021 14:22:48

Where am I?: 90095

Choose a zip-code:

Include All ▾



Services People Use in this Zipcode

calfresh food pantries food banks

none community fridges

Food Banks Community Fridges CalFresh None

< >

<https://wny-duong.github.io/WebDev-GIS-Health-Equity/>

Course Details

General Course Structure *

Mondays



Lecture



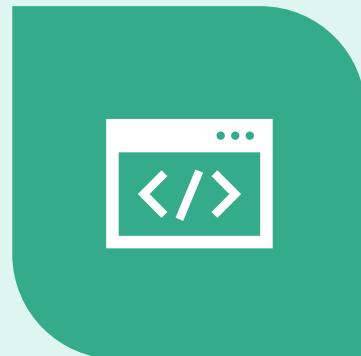
Wednesdays



Lab



Fridays



Group Work

*** Due to holidays, course structure is expected shift around,
For example: Labs can occur Fridays**

Assignments

Individual



Readings

Weekly

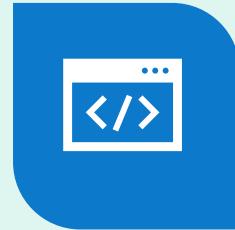


Labs



Posts

Group



Project Milestones

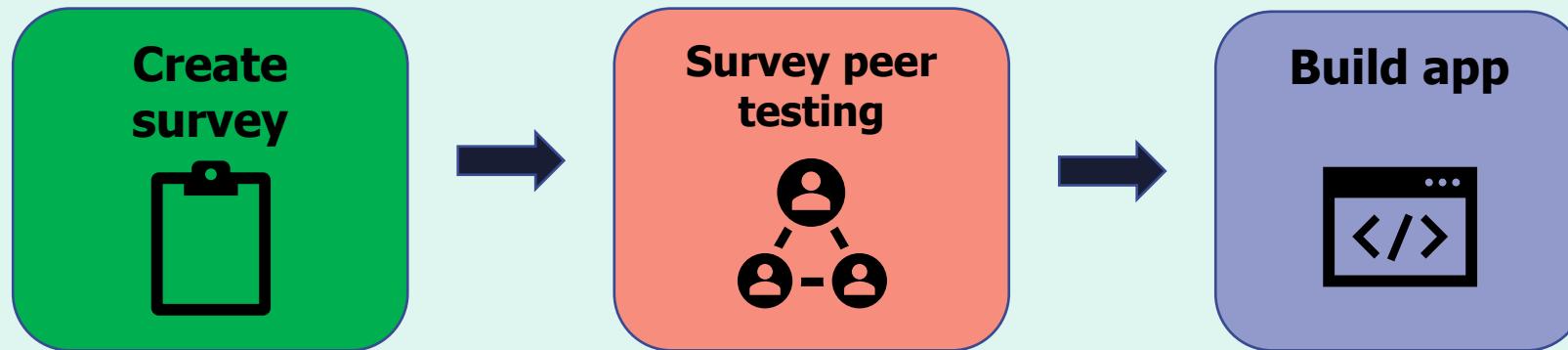
Intermittent



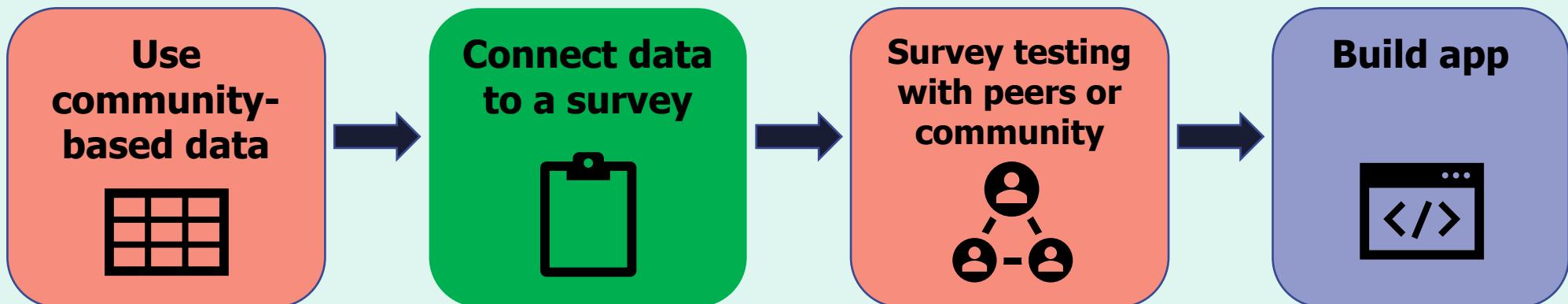
Final Project

Final Group Project

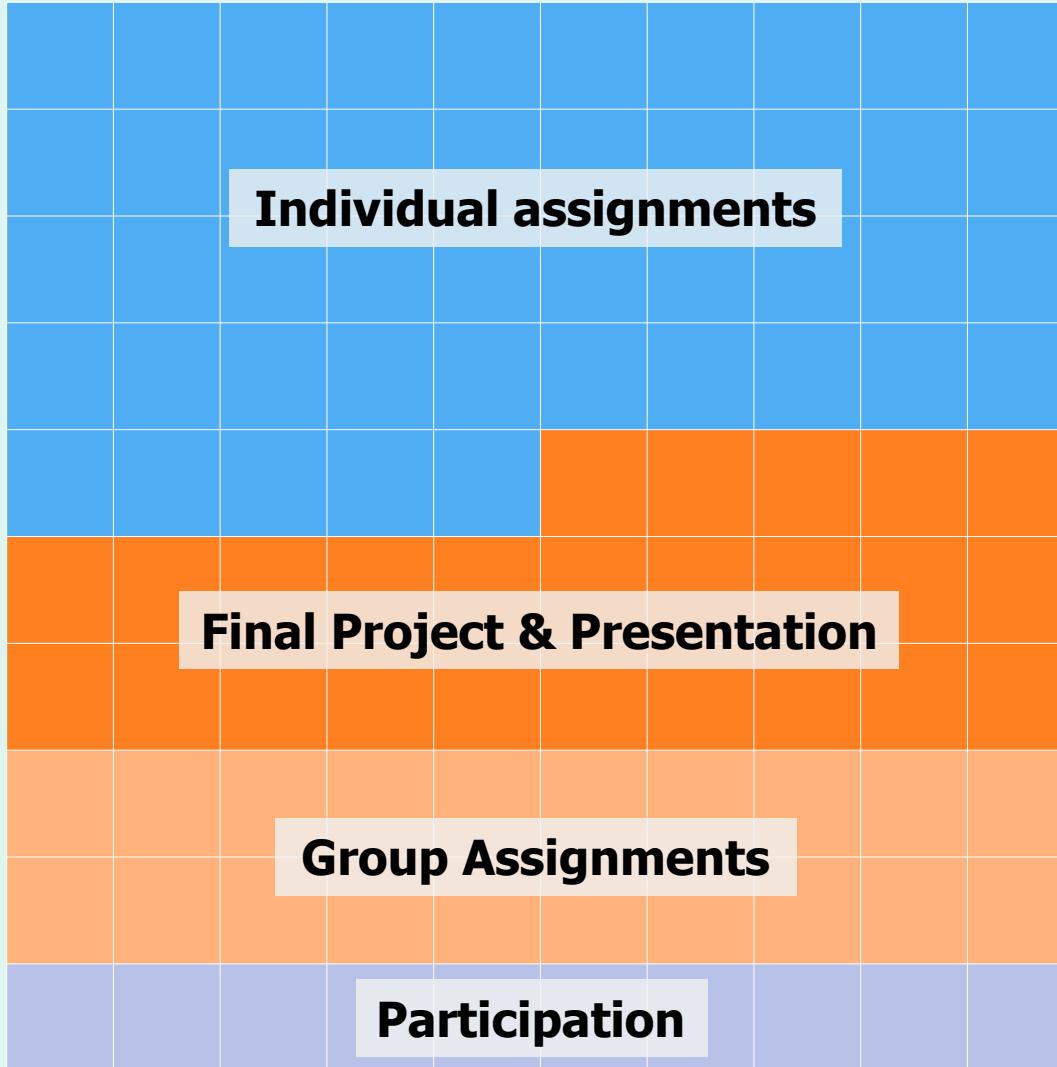
Option A:



Option B:



Evaluation



45%

25%

20%

10%

The Syllabus

[albertkun / 21S-191A](#)[Notifications](#)[Star](#)

1

[Fork](#)

0

[Code](#)[Issues](#)[Pull requests](#)[Discussions](#)[Actions](#)[Projects](#)[Security](#)[Insights](#)[master](#) ▾[1 branch](#)[0 tags](#)[Go to file](#)[Code](#) ▾

About

No description, website, or topics provided.

[Readme](#)

Releases

[albertkun image fix 2](#)

3de2396 7 days ago

🕒 42 commits

[Assignments](#)

added assignments

16 days ago

[Labs/Week 1](#)

labs 1 link

7 days ago

image fix 2

7 days ago

It's on GitHub!

<https://github.com/albertkun/211A-ASIAAM-191A>

Course Outline

Week	Topics	Labs
1	Introduction to GIS, data, and ethics	HTML, CSS, JavaScript, Git
2	Critical Cartography and Civil Society	HTML, CSS, JavaScript
3	Society, Technology, and Ethics	HTML, CSS, JavaScript
4	Designing for Civil Society	HTML, CSS, JavaScript
5	Mentorship and Collaboration	HTML, CSS, JavaScript
6	Beyond Web Development and Social Change	HTML, CSS, JavaScript
Finals	Final presentations	



= Scheduled Visiting Voice

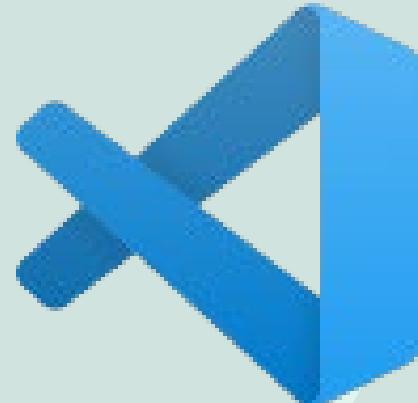
Course Software Requirements*



GitHub



– completing assignments



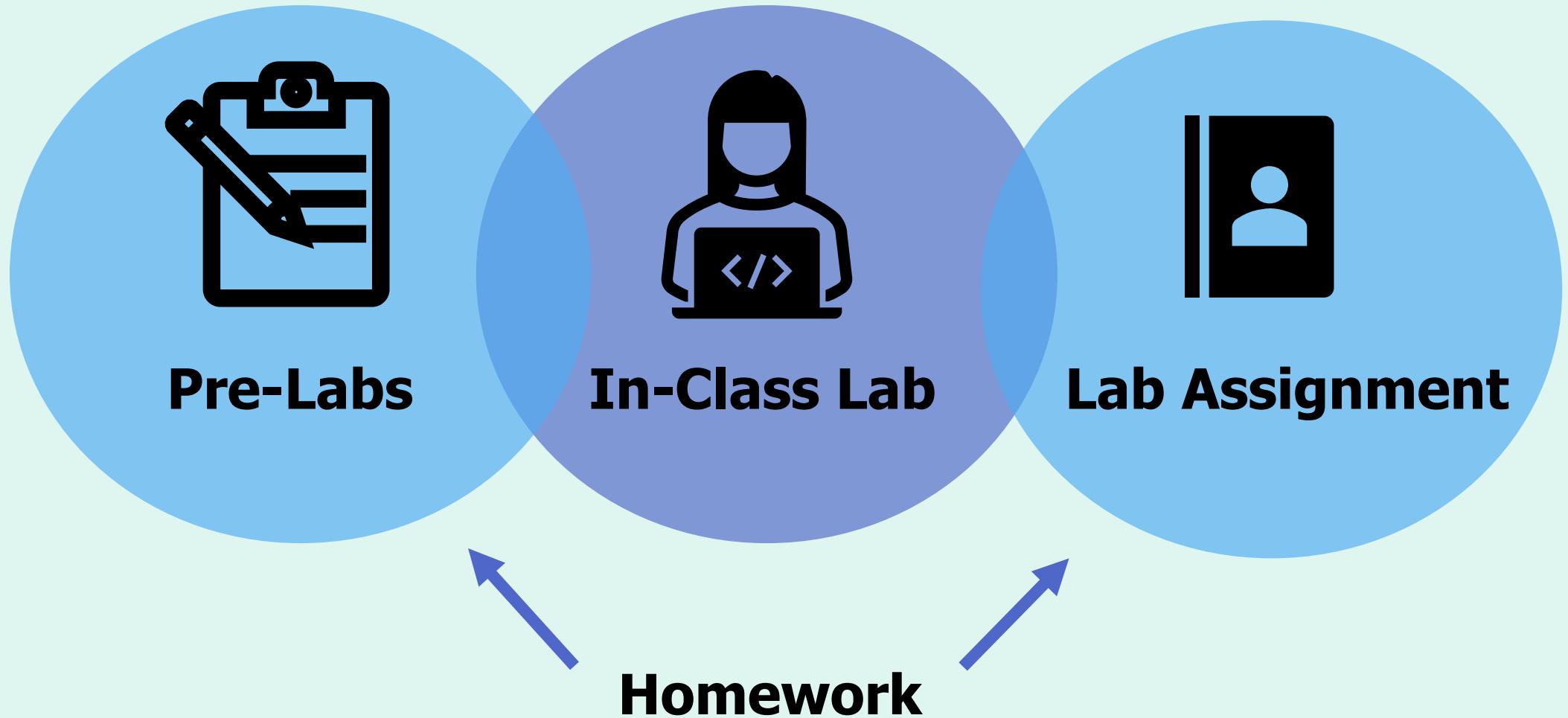
VS Code – writing code



Firefox – debugging

* Other software will not be supported

Labs



Try to avoid this situation:



Get help early and often!

Places to get help

- **Search online**

StackOverFlow.com

- **Class Discord**

<https://discord.gg/5VWcMgQmSN>

- **Ask on the class discussion forum**

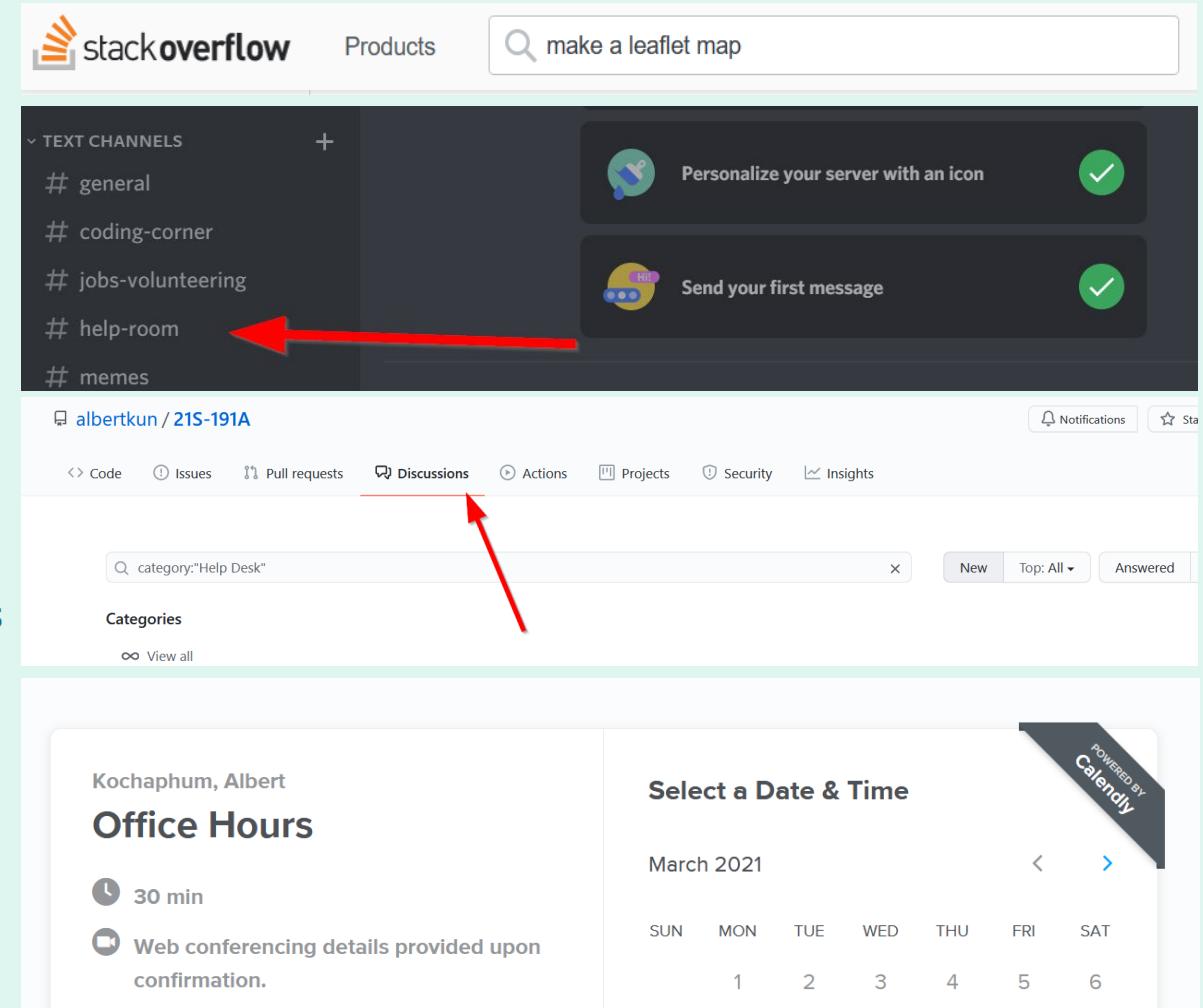
<https://github.com/albertkun/211A-ASIAAM-191A/discussions>

- **Drop by office hours**

<https://calendly.com/albertkun/office-hours>

- **Email the instructor**

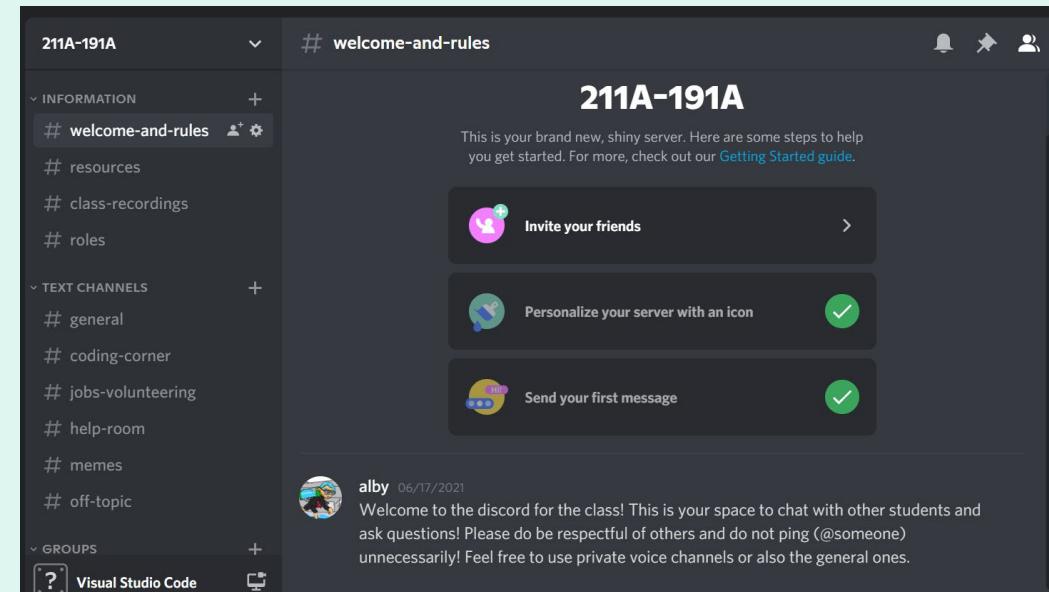
albertkun@oarc.ucla.edu



Class Discord Server



- **Messaging + Voice Chat + Memes!**
- **Works on web browser, phone, and PC/Macs**
- **Need help getting started?**
 - <https://support.discord.com/hc/en-us/articles/360033931551-Getting-Started>



Join here:

<https://discord.gg/5VWcMgQmSN>

Core Principles in summary:



slido

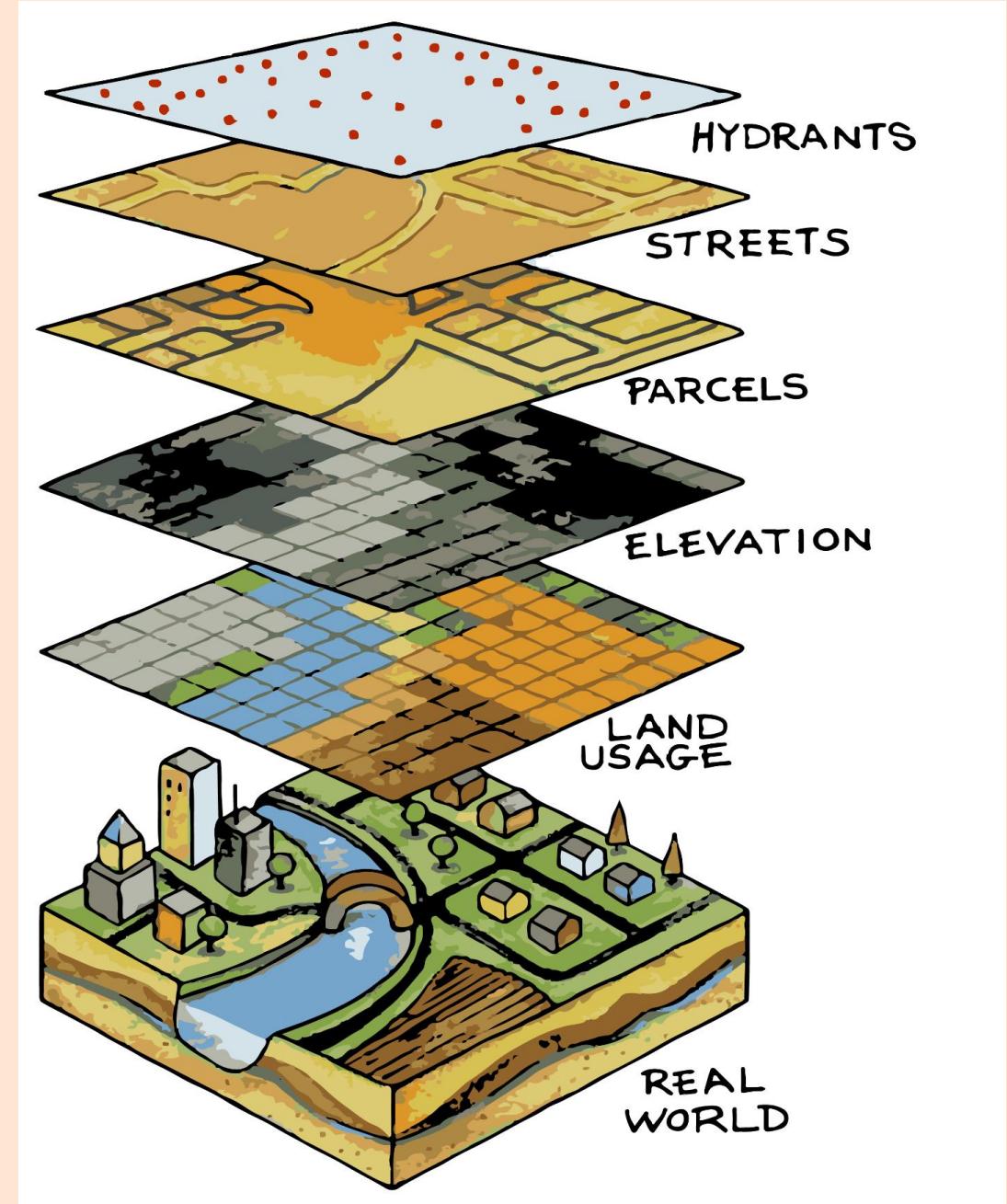
Audience Q&A Session

- ⓘ Start presenting to display the audience questions on this slide.

GIS, Data, and Ethics

**Albert Kochaphum
Lecture 1 | June 21st, 2021**

GIS



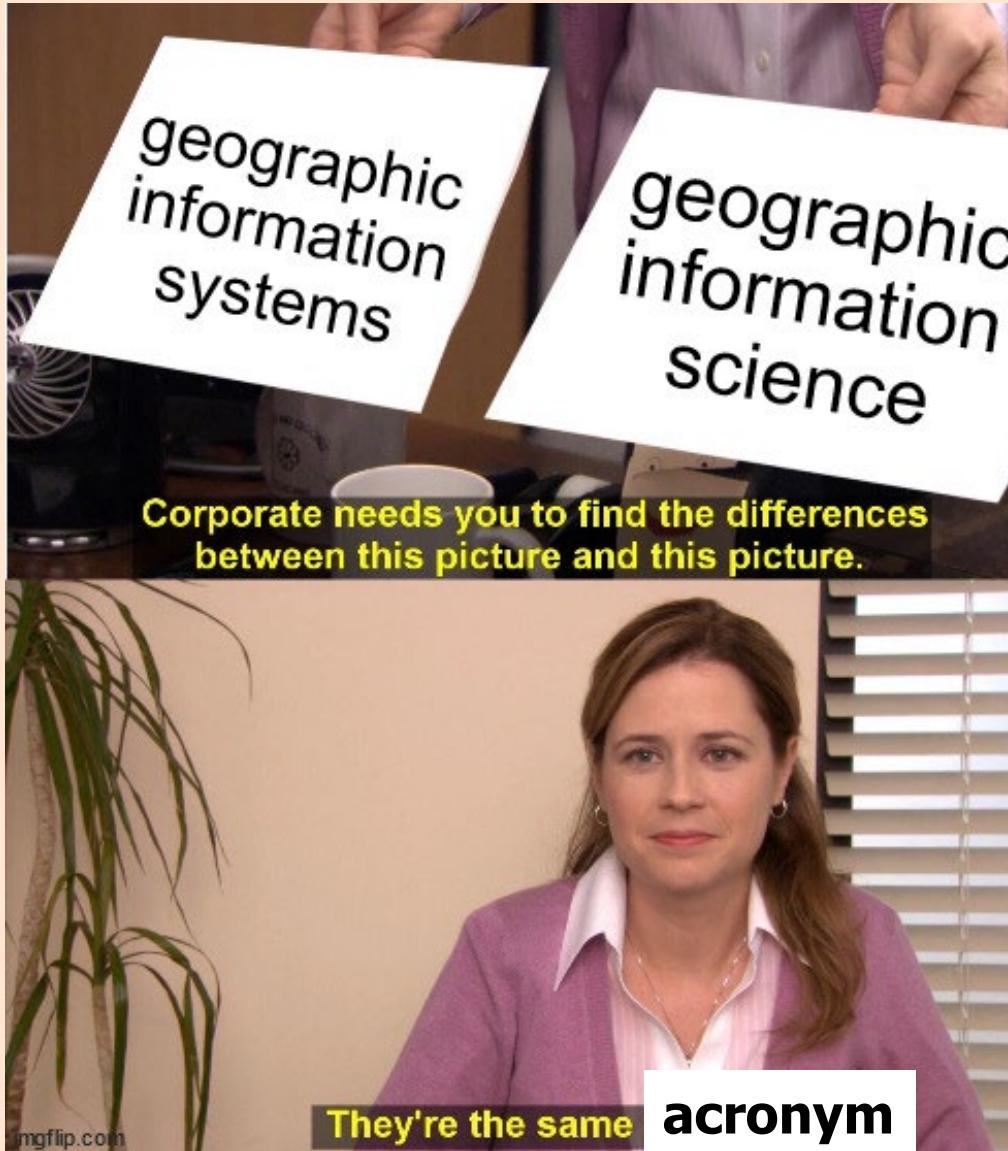
What is GIS?

A) Geographic Information Systems

or

B) Geographic Information Science

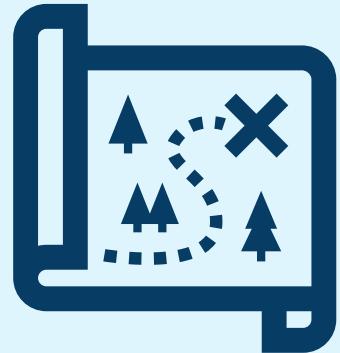
What is GIS?



What is GIS?

GISystems

=



Spatial tools

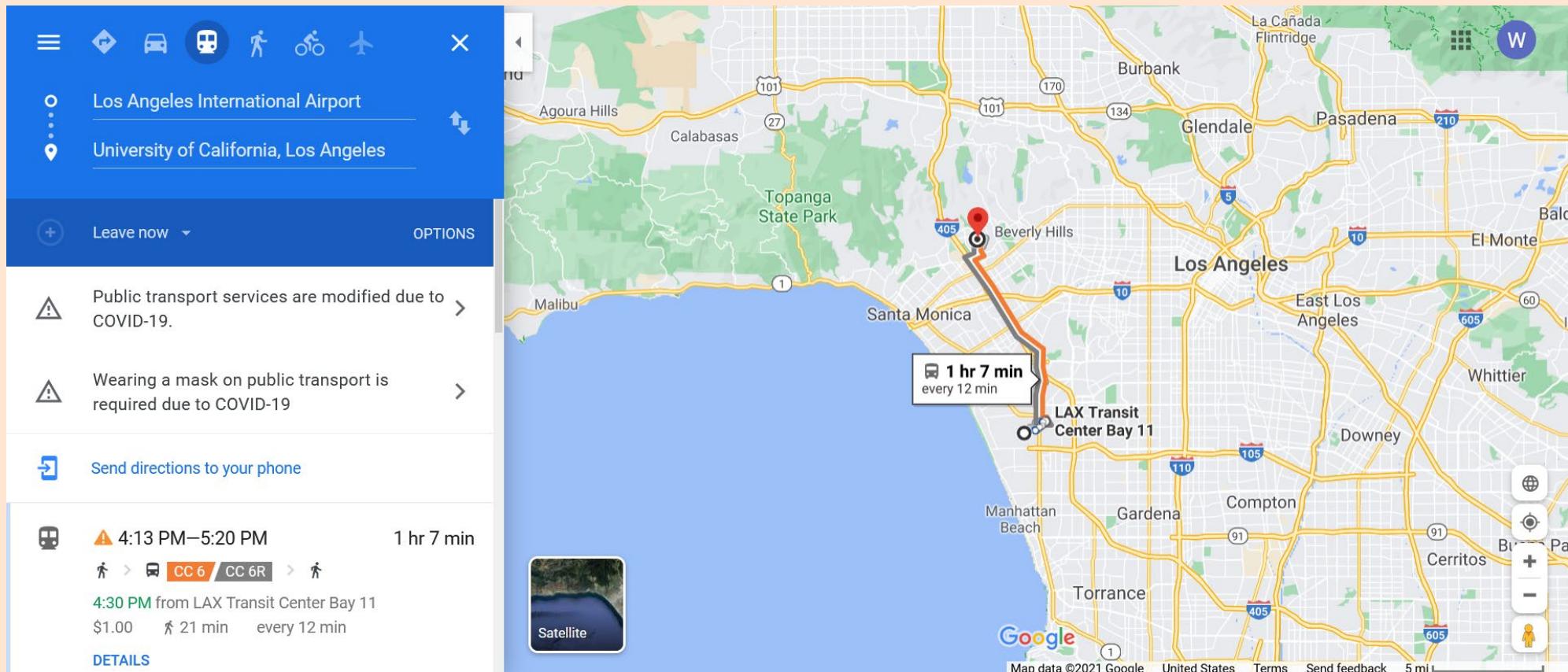
GIScience

=



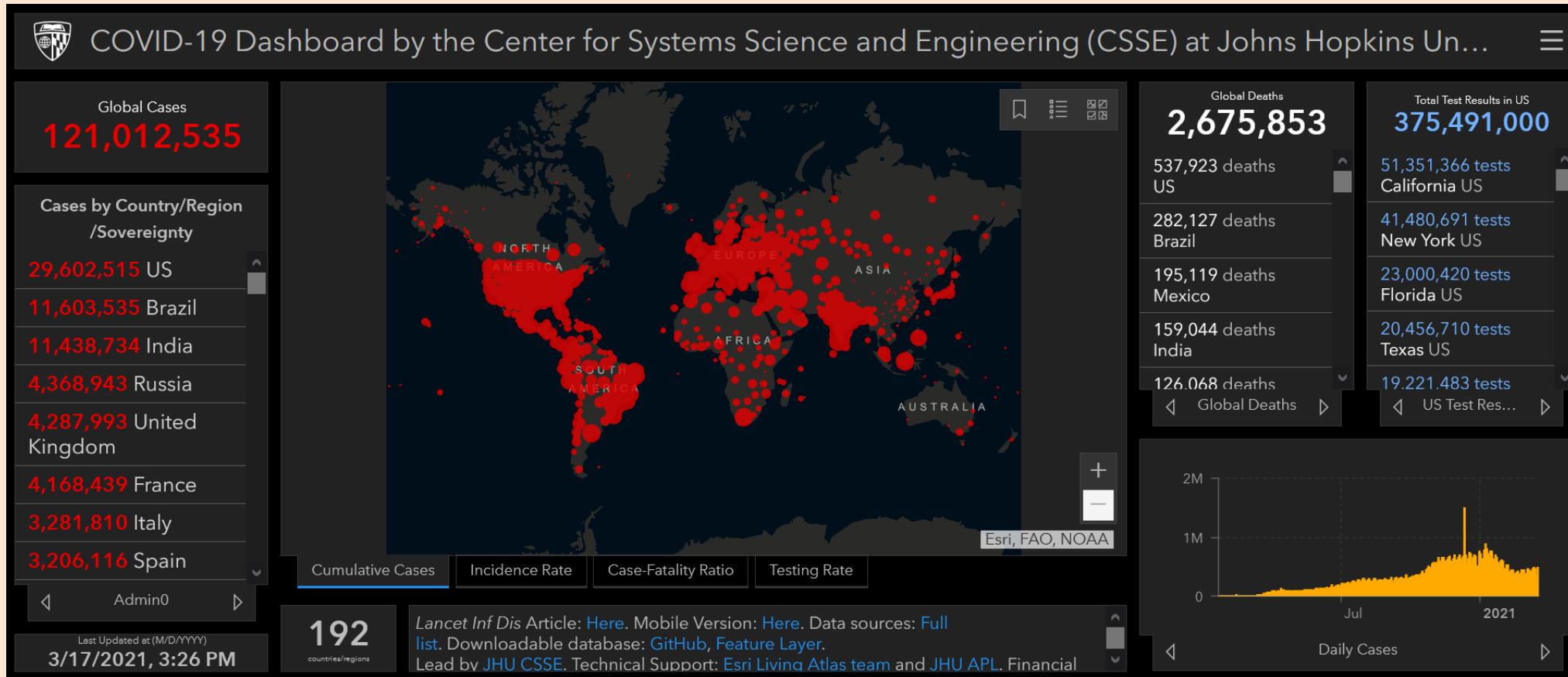
Spatial thinking

Examples of GIS



Google Maps Directions from LAX to UCLA, <https://maps.google.com>

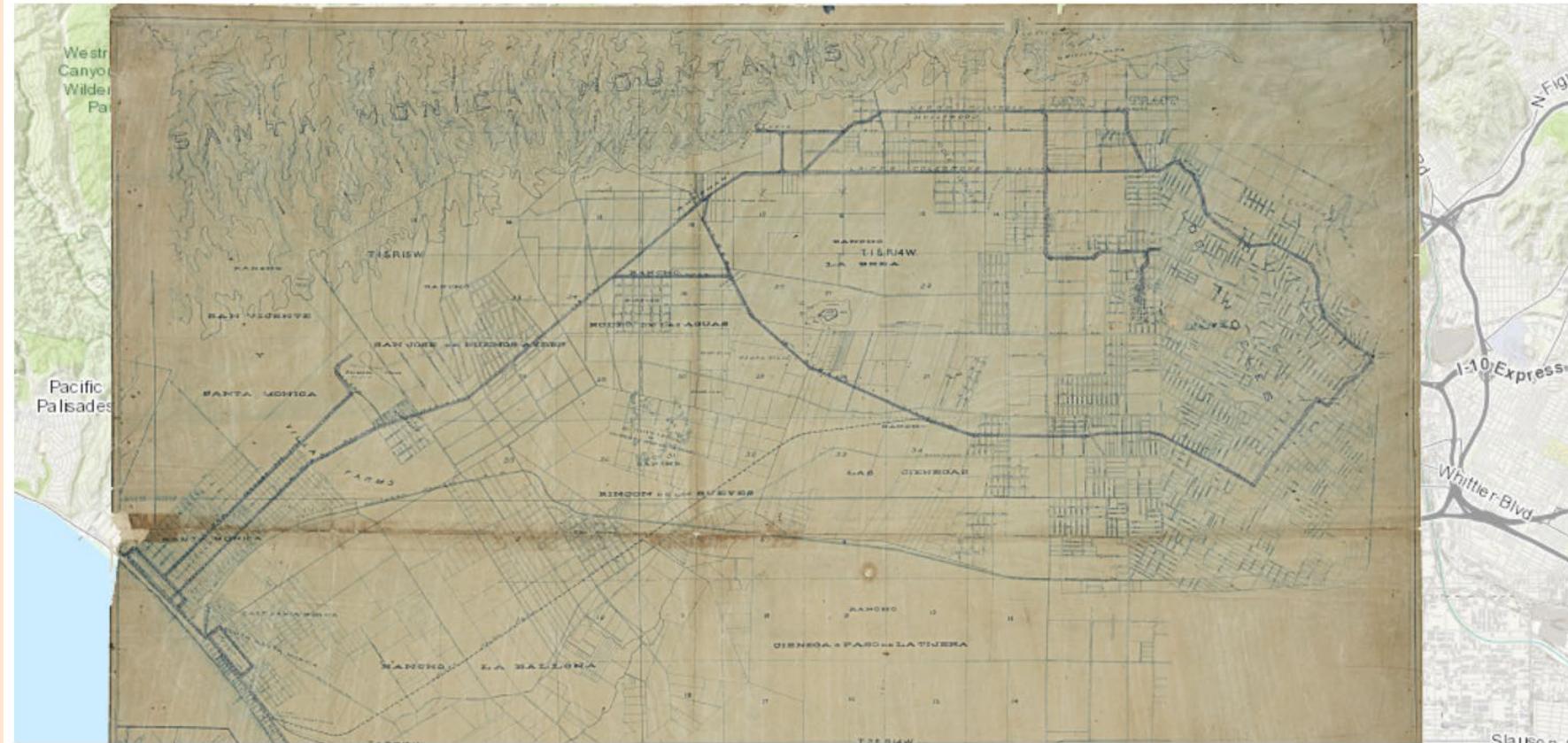
Examples of GIS



Johns Hopkins University COVID-19 Dashboard, <https://systems.jhu.edu/>

Are historical maps GIS?

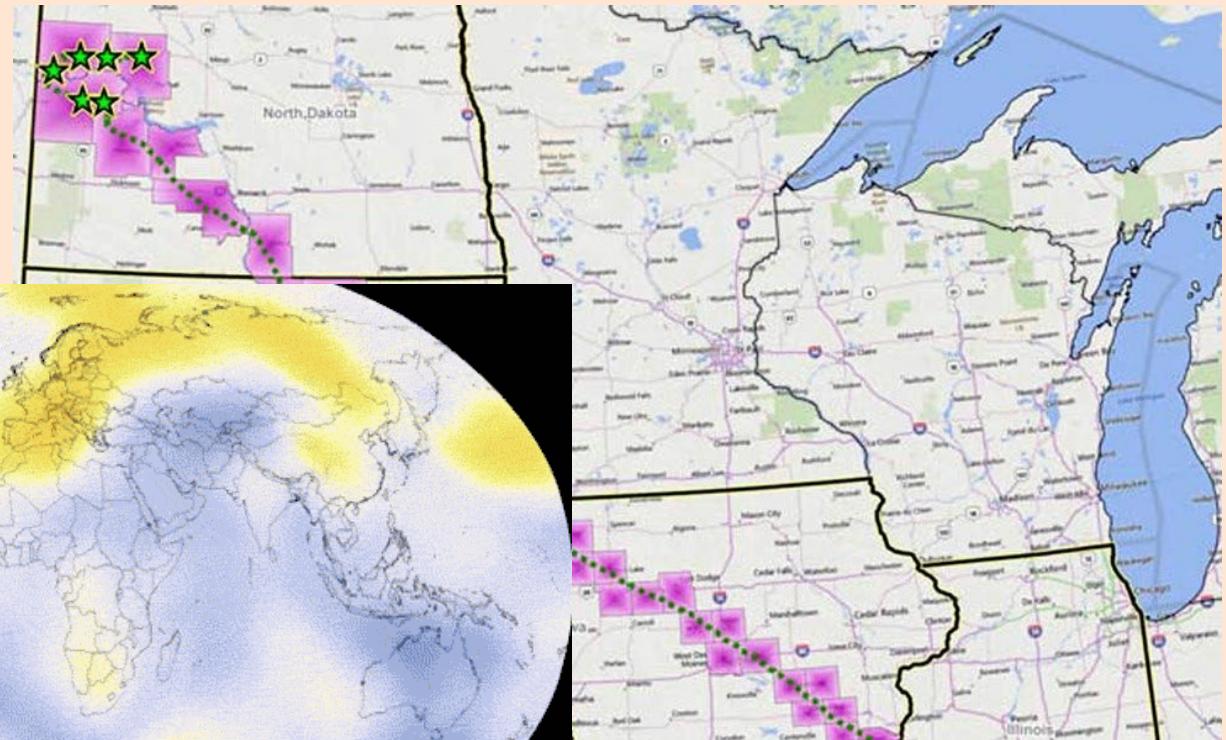
Map of the Los Angeles-Pacific R.R.



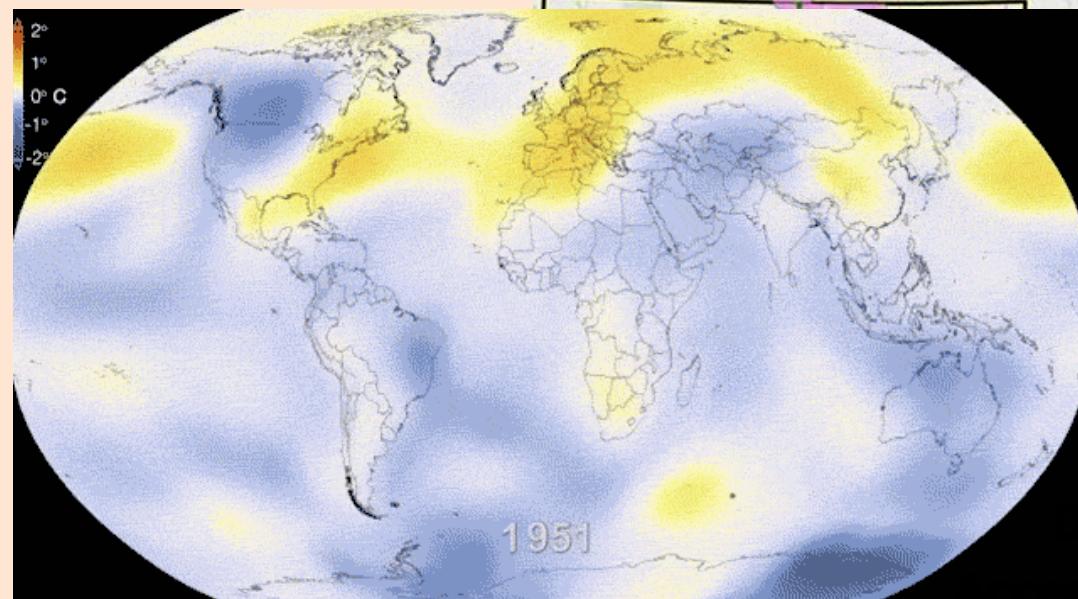
HyperCities Map Library, <http://www.hypercities.com/maplibrary/index.html>

GIS exists in various forms

It can disempower



It can empower



North Dakota
Access Pipeline

**Global Temperature
Increase**

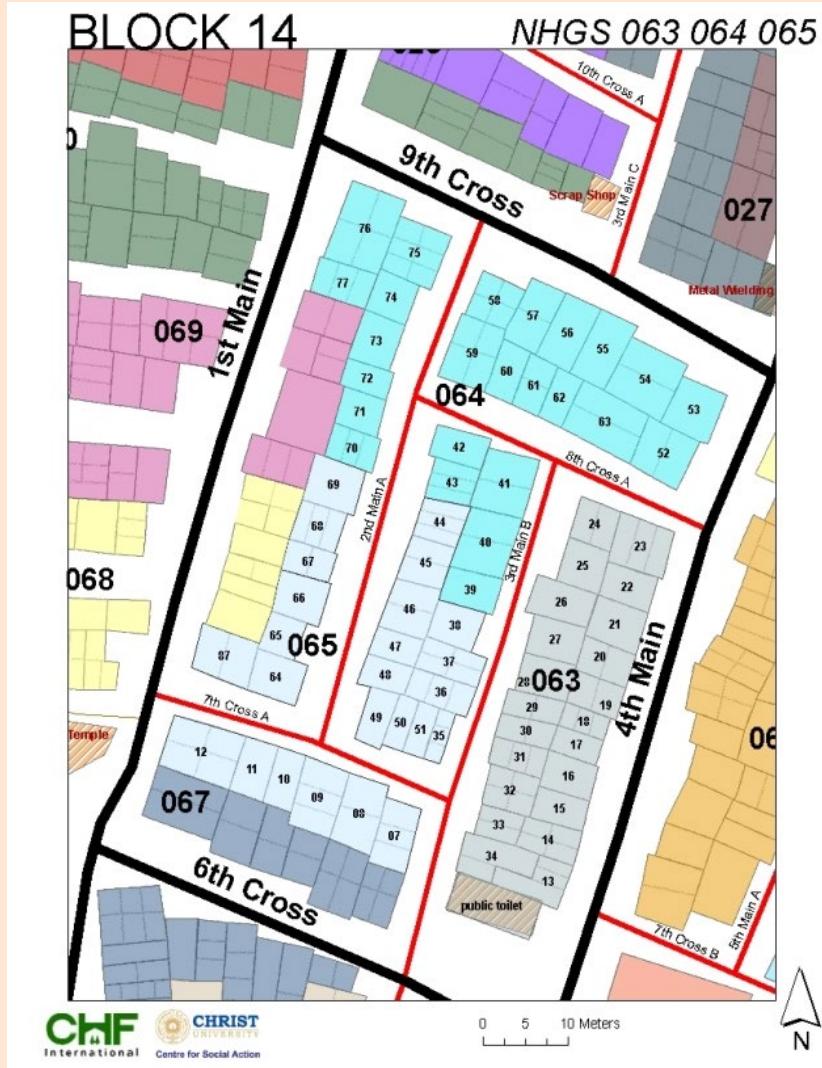
Participatory GIS/Community-Based GIS

**Our
Focus**



	Outsiders' objectives include	Roles/Relationships		Actions		Ownership
		Outsider'	Local people's	Outsider'	Local People's	
TOTALITARIAN	State political control	Dictator	Slave	Command	Comply	Outsiders'
NOMINAL	Cosmetic legitimisation	Manipulator	Puppet			
EXTRACTIVE	Obtain local knowledge for better planning	Researcher /planner	Informant			
INDUCED	Gain action Through material incentives	Employer	Worker			
CONSULTATIVE/INSTRUMENTAL	Improve effectiveness and efficiency	Rational economiser	Collaborator			
PARTNERSHIP	Share responsibility and power	Co-equal partner	Co-equal partner			
TRANSFORMATIVE	Facilitate sustainable development by local people	Facilitator /catalyst	Analyst /Actor /Agent			
SELF-MOBILIZING	Support spontaneous action	Supporter	Owner /controller	Support	Initiate	Local people's

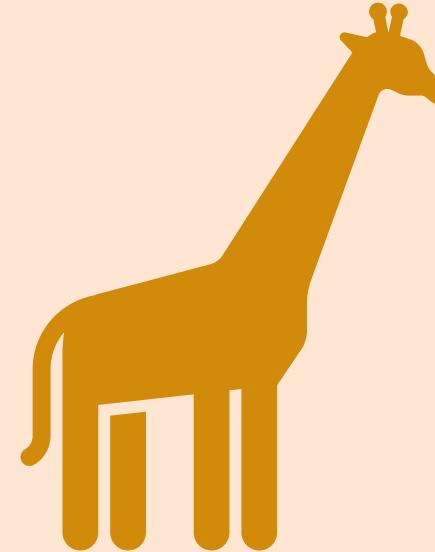
Participatory GIS/Community-Based GIS



Data



Data



Qualitative

- Color
- Animal species

Quantitative

- Height
- # of legs

Applying our skills!

Was the data collected in
the Student Survey
qualitative or quantitative?

Welcome to the Student Survey for AA-191A!

Fill out this student survey for AA-191A: Web Development and GIS for Social Change at your earliest convenience before the first day of class, Monday 6/21. Please remember that no programming or GIS experience is necessary for this course. This survey will assist in partnering you up with other students and also be used to help us learn about each other in the first week.

Be sure to read the syllabus to learn more about the course before responding:
<https://github.com/albertkun/211A-191A/>

* Required

What type of data was collected in the Student Survey?

- ⓘ Start presenting to display the poll results on this slide.

Critical Data Studies



Problems with a data-only approach:

Social problems

Knowable

Controllable

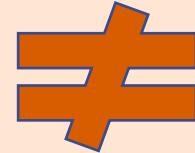
Rational

Neutral

Technocratic

Objective

Non-ideological



Voices of community

Power relations

Power Inequalities

Alternative data forms:

The screenshot shows the Humanitarian OpenStreetMap Project (HOT) website. At the top, there's a navigation bar with links to Data Catalog, Geohub, Blog, Developer Resources, About, and social media icons for Facebook, Twitter, and a search icon. Below the navigation is a main menu with sections like WHAT WE DO, OUR WORK, TOOLS & DATA, NEWS, COMMUNITY & ORGANIZATION, PARTNER WITH US, and GET INVOLVED. A search bar is also present. The main content area features a map of the world with a search bar and a 'Go' button. A blue banner at the bottom left reads "Mapping Hate Crimes in the US #OneHateCrimeIsTooMany". On the right side of the banner are links to "SEE COVID HATE CRIMES" and "REPORT INCIDENT". A large white box in the center contains a reporting form. It starts with a note: "If this is a COVID-related incident, consider navigating to the COVID page through the menu and reporting there." Step 1, "Harassment Location", has a text input field labeled "Enter location" with "BACK" and "NEXT" buttons. Step 2, "Date of Harassment", is partially visible below it. To the right of the form is a vertical sidebar with red arrows pointing left and right.

Eric
Garcetti
@MayorOfLA

Data Catalog Geohub Blog Developer Resources About | [f](#) [t](#) [Search](#) | Sign In

HOT Humanitarian OpenStreetMap

WHAT WE DO OUR WORK TOOLS & DATA NEWS COMMUNITY & ORGANIZATION PARTNER WITH US GET INVOLVED

OpenStreetMap Edit History Export

Search Where is this? Go

Mapping Hate Crimes in the US #OneHateCrimeIsTooMany SEE COVID HATE CRIMES REPORT INCIDENT

If this is a COVID-related incident, consider navigating to the COVID page through the menu and reporting there.

1 Harassment Location

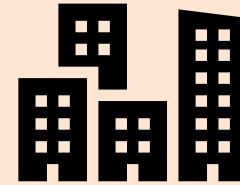
Enter location

BACK NEXT

2 Date of Harassment

Alternative data forms:

More Community based



Open Data



Humanitarian



Crowdsource



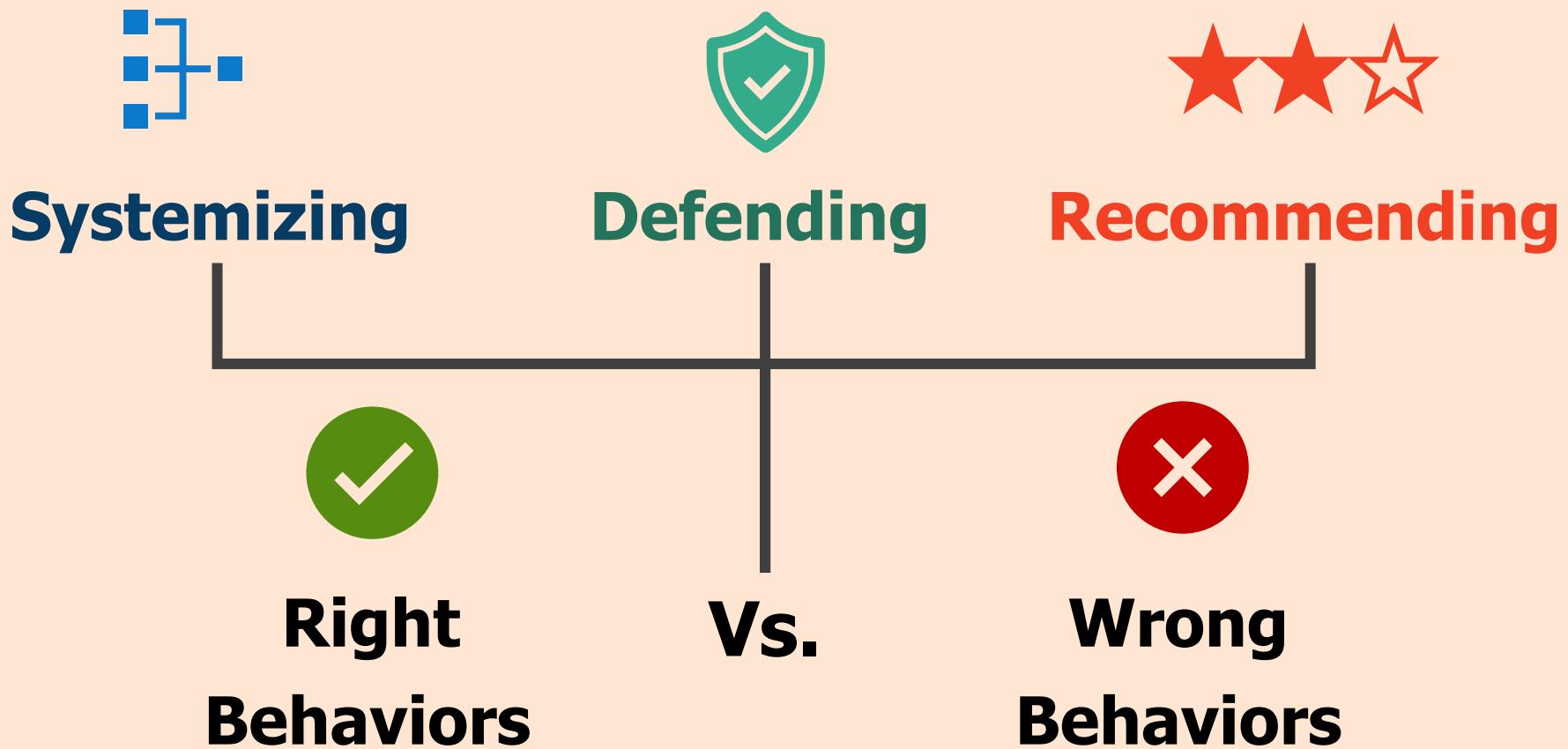
Participatory



**Our
Focus**

Ethics

Ethics

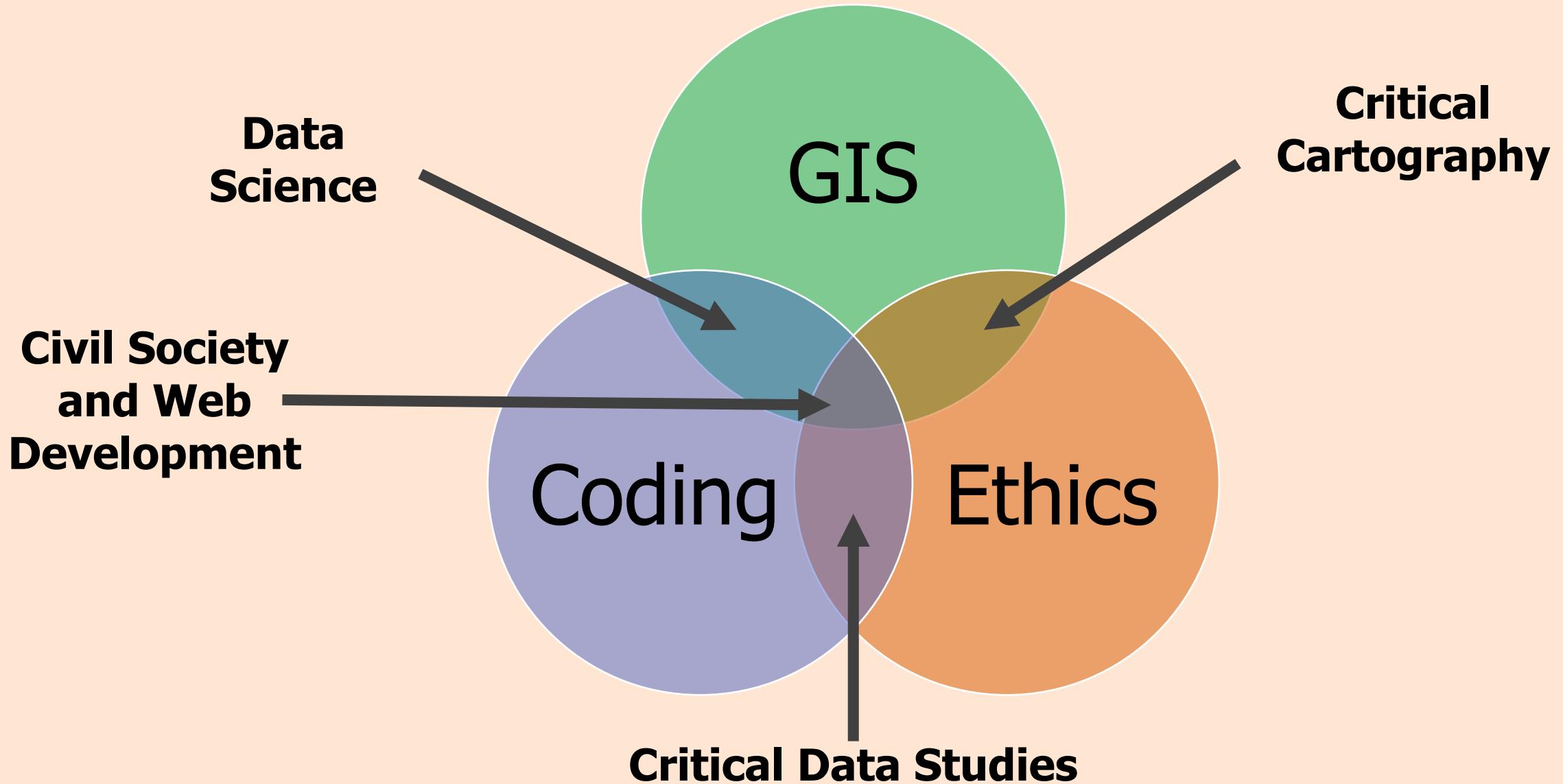


Ethics

- Concerned about **how** and **why** we code/make maps
- There are no “**right**” answers
 - **But** we should be able to defend why we chose a particular action



Fitting Ethics in



Ethics



learn to
code without
facing
social problems



learn to
code for
communities facing
social problems

My Ethics



"We are privileged to be able to have access to education, our responsibility should be to empower others."



"Technology should be used to fight back and amplify community voices against institutions."

Ethics is rooted in the “service” to the university mission



UCLA'S CORE MISSION CAN BE EXPRESSED IN JUST THREE WORDS:

Education, Research, Service.



First Discussion

What are your ethics when it comes to using technology?

- In what ways could the internet and maps be used for good? For bad?
- Does this apply to other technology too?
 - Ex. Video games or smartphones

Thinking cap for the week:

**What are problems with the way we use
data and GIS?**

<https://github.com/albertkun/211A-ASIAAM-191A/discussions/2>

First Assignments

Complete the following:

Due Wednesday 6/23:

1. Pre-Lab

Due Wednesday 6/30:

1. Reading
2. Thinking Cap

Note: Unless specified otherwise, all assignments are due at the beginning of class. Late assignments will be given half credit up to 1 week.

BUT, if you need an extension, please reach out to me ahead of time!