

Welcome to

Asia American Studies-191A

# Web Development and GIS for Social Change

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Critical Data for Transforming Civil Society



Join at  
**slido.com**  
**#ucla**

Albert S. Kochaphum  
Week 1 | April 4<sup>th</sup>, 2023



## How are you feeling?

Join at  
**slido.com**  
**#ucla**





## What did you think of the pre-course survey?

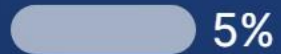
Just right



Needs more puns.



What pre-course survey?



Too long



Too short



Join at  
**slido.com**  
**#ucla**

# **Web Development and GIS for Social Change**

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Welcome



**Welcome**  
**Introductions**  
**Lecture**  
**Wrap-up**

# Today's Agenda

**Introductions**

**Course details**

**Lecture**

**Discussion**

**Wrap-up**



# Web Development and GIS for Social Change

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Introductions

Welcome

**Introductions**

Lecture

Wrap-up



**About me**



GIS + code = ftw

bikeclist

can we haz  
more social equity?

made in san francisco

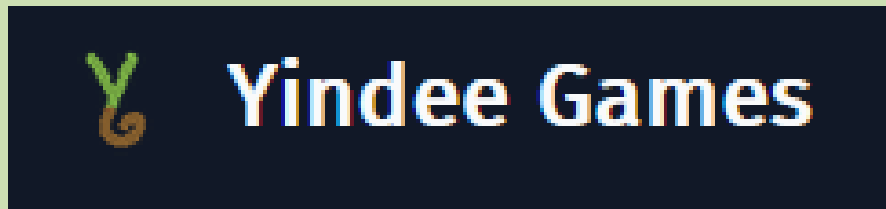
omg, climate crisis :(

wow! Much tarrible puns

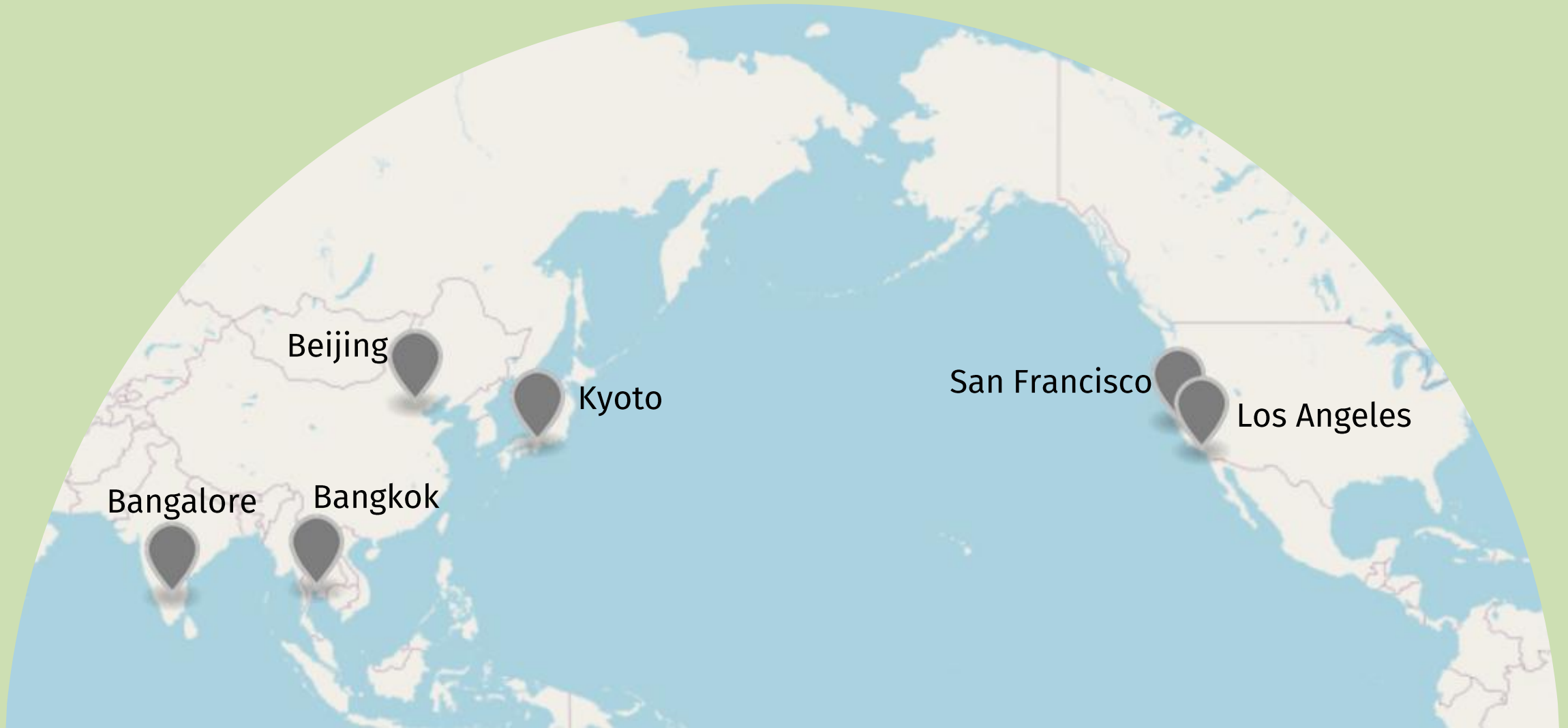
newbie game dev



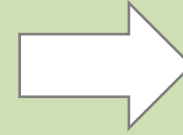
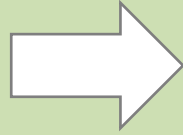
# About me person**ALLY**



# About me person**ALLY**



# About me “profession**ALLY**”



**wHAT** that really means is....



I wear many **HATS**













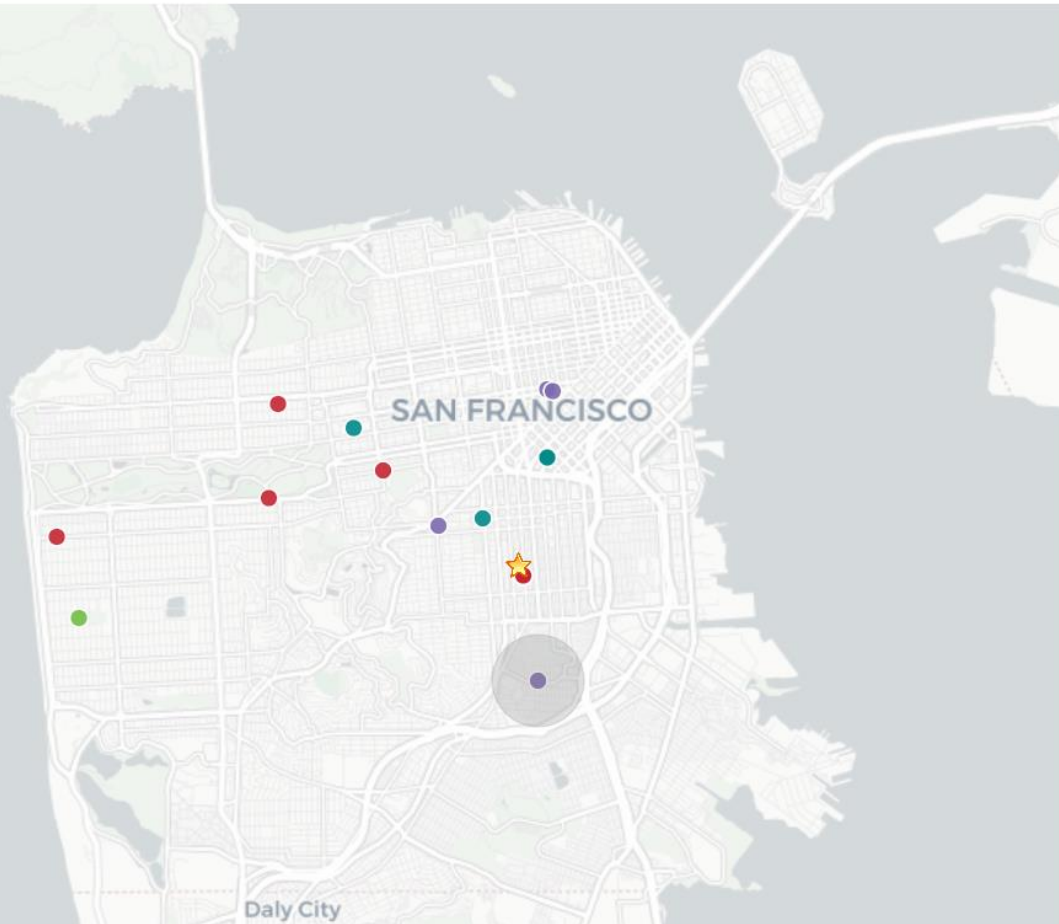


Jane Map

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



Host an Event



### 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

Leaflet | © OpenStreetMap © CartoDB

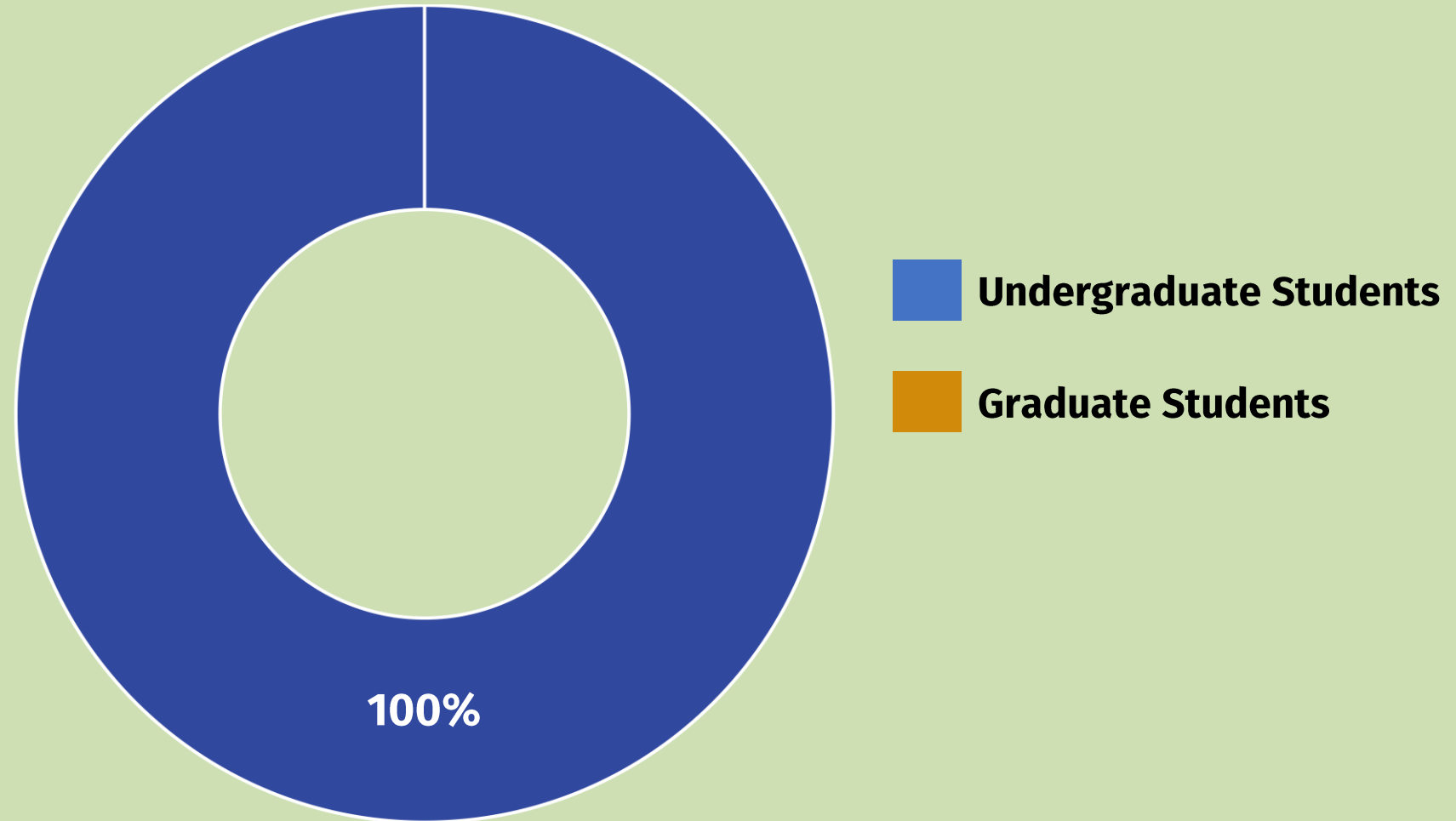
Daly City

What type of web application we will be making!

# **About you\***

(\*respondents before 4/4 and said “yes” to sharing their surveys)

# About you: Enrolled Student Status



First time teaching only undergraduates! Exciting!!





# Hometowns



Most students are from California, but next largest country is Vietnam!



# About you! GIS

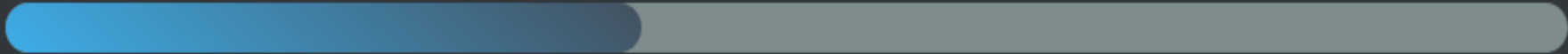
## What is your familiarity with GIS?

Radio buttons

16 (59%): **None, the course title was the first time I heard about GIS**



11 (41%): Some, I got the GIST of it and I can make some maps



0 (0%): Lots, I'm a spatial GenluS!



No one is coming in as a GIS expert!



# About you! Data

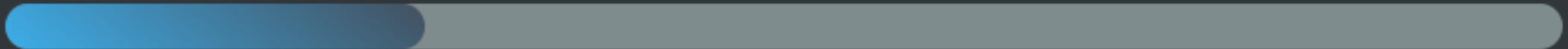
## What is your familiarity with cleaning data?

Radio buttons

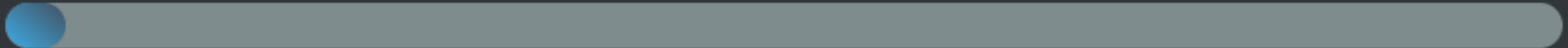
18 (69%): **Some, I've cleaned up data before and made some charts**



7 (27%): None, isn't that a Star Trek character?



1 (4%): Lots, you can find spreadsheets on my toast because they are my jam.



But most people are coming in with some data experience!

# About you! Civil Society

**What is your experience with civil society?**

Radio buttons

15 (58%): **Some, I have done things like volunteering at a non-profit before**



7 (27%): None, isn't society already civil?



4 (15%): Lots, I put the PRO in protests.



Majority have either some or no experience with civil society!

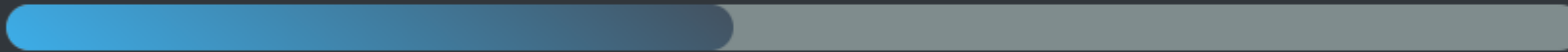


# About you! Coding

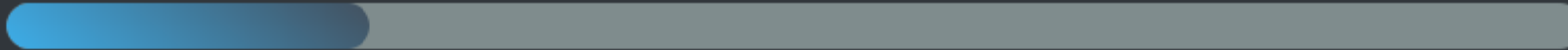
No programming experience is necessary for this course, but if you have programmed before, how comfortable are you with it?

Radio buttons

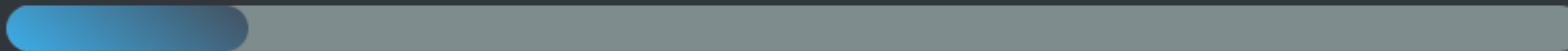
12 (46%): **Some, I have written code before, but it's kind of intimidating.**



6 (23%): Pretty comfortable, I enjoy it.



4 (15%): I have no experience, so I cannot say.



4 (15%):

0110100100100000011010110110111001101110111011100100000011000100110100101101110011000010111001001111001



Most people have some experience! Quite a few enjoy it!

# About you! By you!

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

Name

Major

Favorite Map

Remote students: Let me know in the chat if you want to introduce

# **About the course**

# About the course

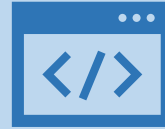
- No **GIS** experience needed
- No **coding** experience needed
- No **civil society** experience needed

# Learning objectives

HTML

CSS

JavaScript



Acquire technical web development skills relevant to mapping for civil society



Apply an ethical framework to mapping projects

Civic Engagement

Critical Cartography



**Learning objectives summarized:**

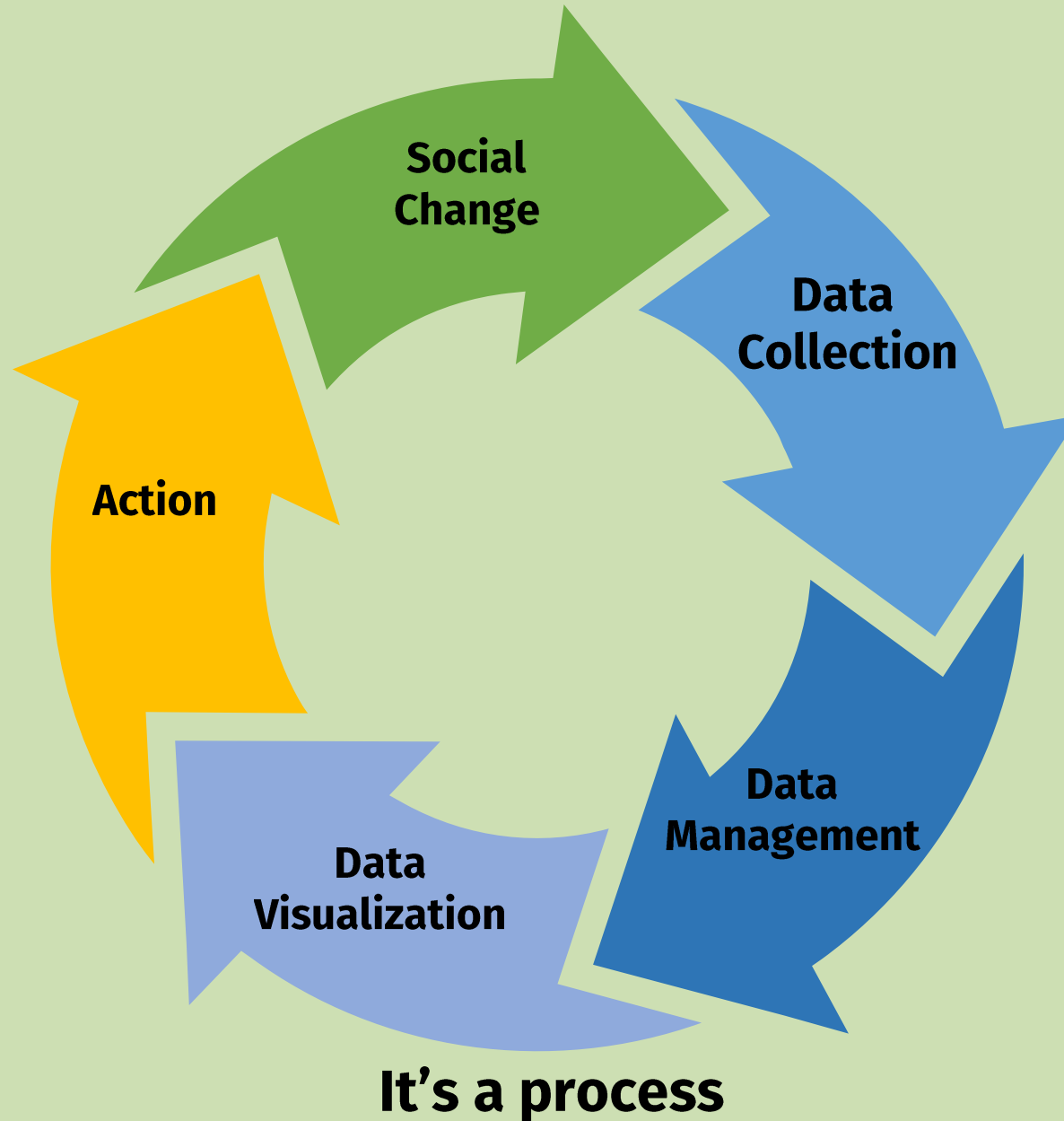
**I HAVE NO IDEA WHAT I AM DOING**



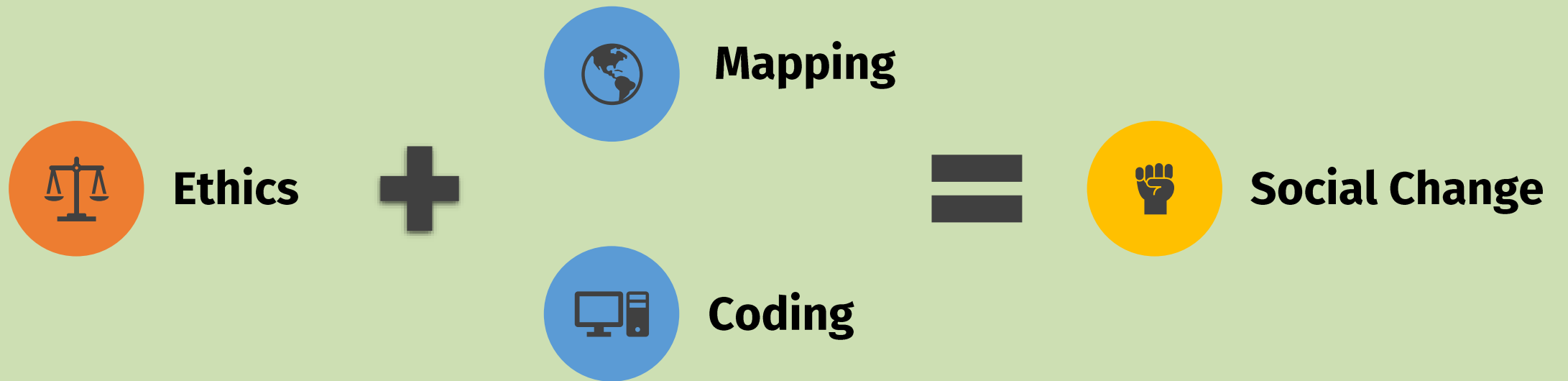


**THIS ISN'T SO RUFF**

# What is this course?



# What is this course?

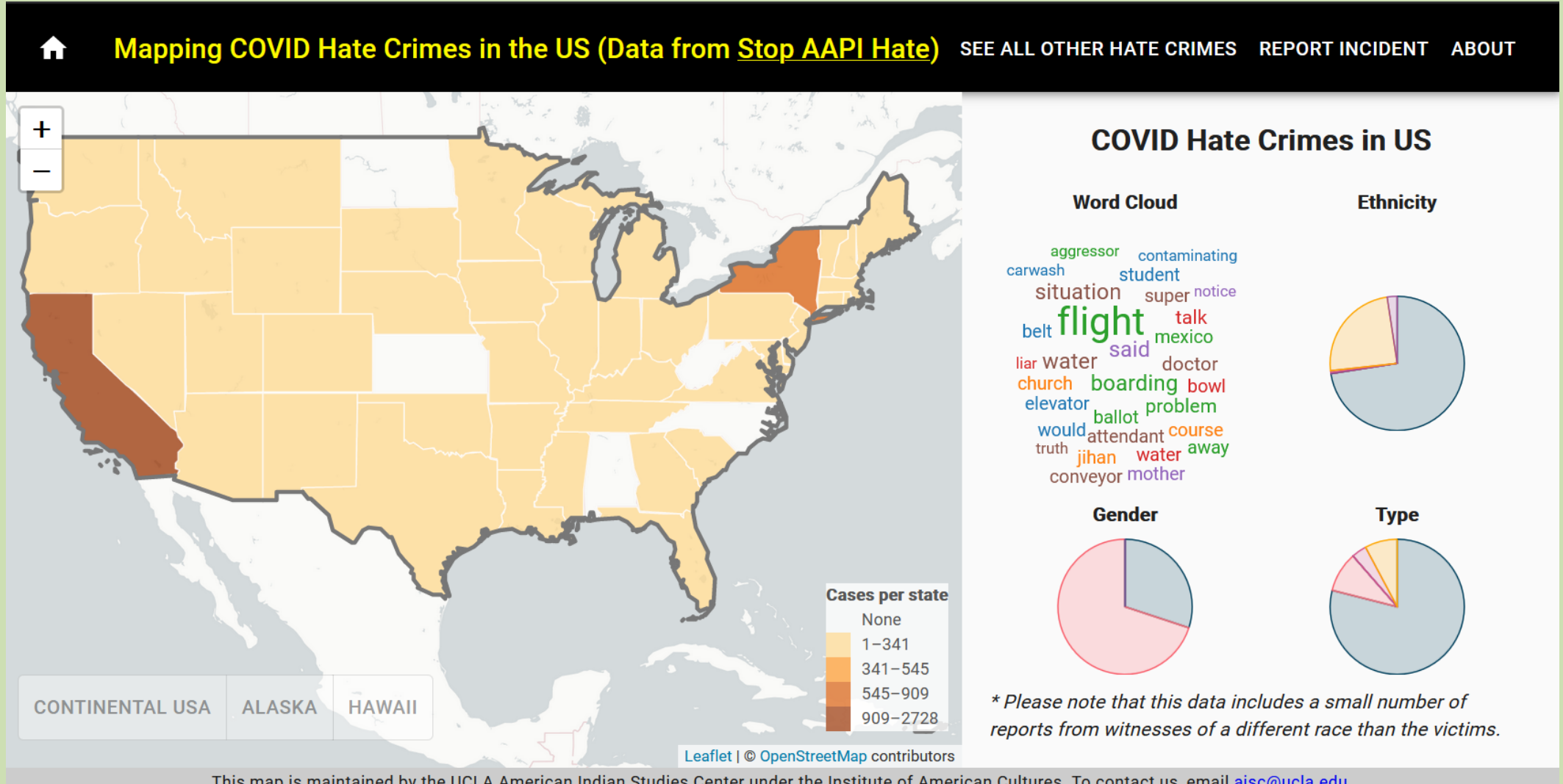




# What is this course, really?



# Another example project



[www.hatecrime.map.com/covid](http://www.hatecrime.map.com/covid)

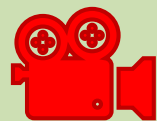
# About the Course

---

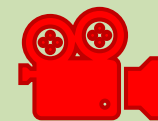
Details



# General Course Structure\*



**Course structure may shift around  
i.e. Labs can occur Tuesdays**



# Assignments

## Weekly

**Individual**



Readings



Labs



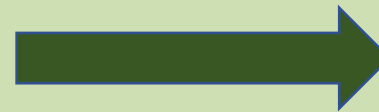
Posts

## Intermittent

**Group**



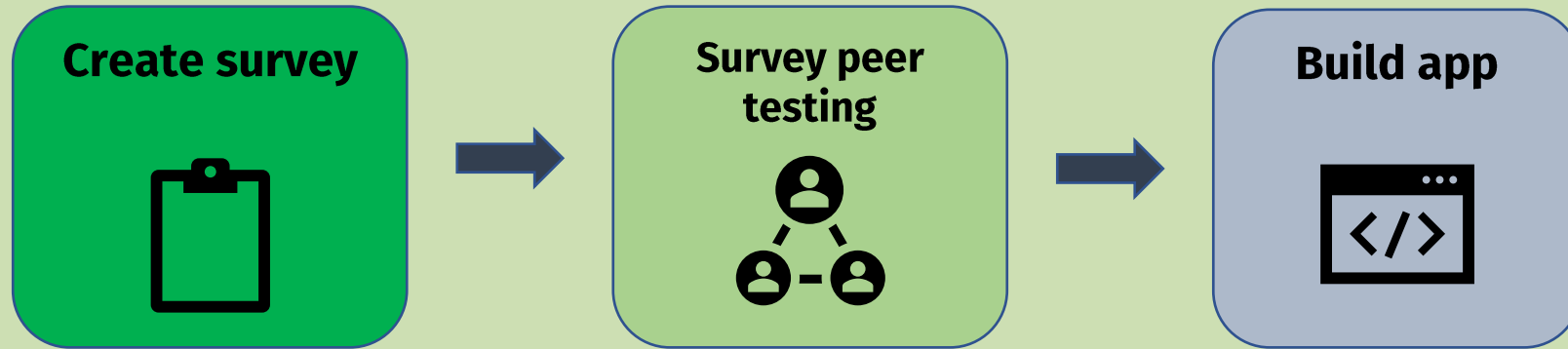
Project Milestones



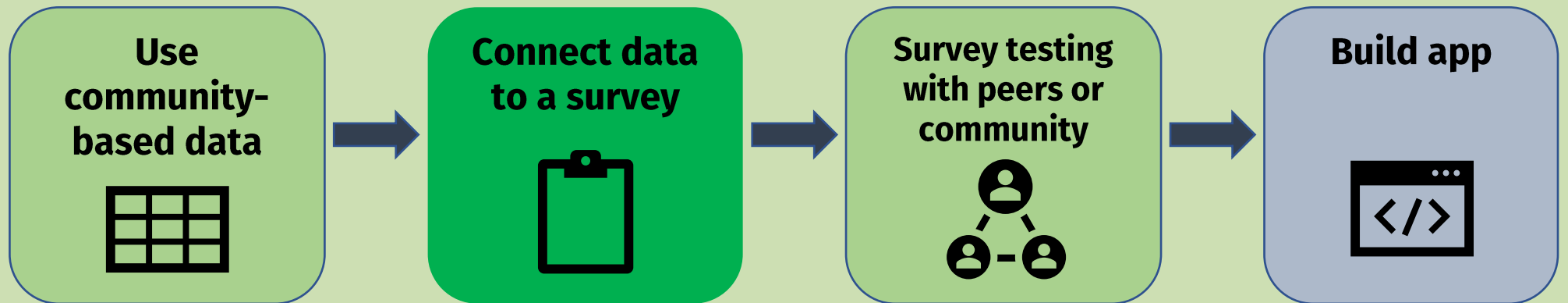
Final Project

# Final Group Project

## Option A:



## Option B:



# **Past Student Projects**

# What Does West LA Have to Say About Food Insecurity?

Choose a zip-code: Include All



## 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

Services Used: Food Pantries

Reasons for Use: Because the did not require ID

Problems of Service: I don't qualify for calfresh, I wish I was

Testimony Submission Time: 5/20/2021 14:22:53

## Where am I?: 90095

Services Used: Food Pantries, CalFresh

Reasons for Use: resources offered through the school

Problems of Service: food pantry hours of operation are limited and require documents I am not comfortable offering

Testimony Submission Time: 5/20/2021 14:23:31

## Where am I?: 90024

Services Used: None

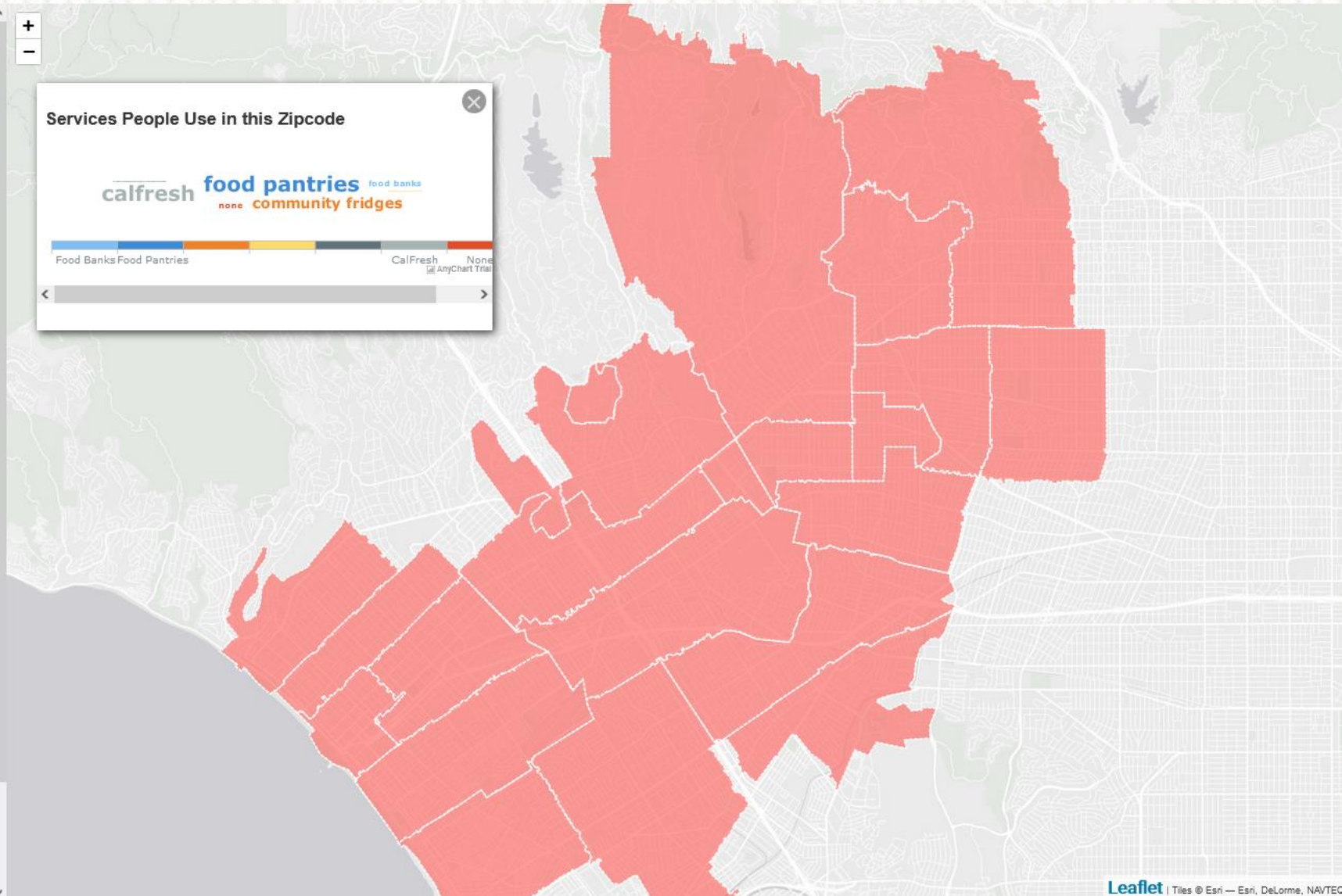
Reasons for Use:

Problems of Service: I haven't been able to access any food aid services. The closest one to me is still too far away and I'm uncomfortable with the information I need to share to apply.

Testimony Submission Time: 5/20/2021 14:25:41

## Where am I?: 90210

Services Used: CalFresh



# Reimagine 6th Street

English Survey

Encuesta en Español

한국 설문 조사

Github

Contact Us

About

Select Language

Powered by  Translate



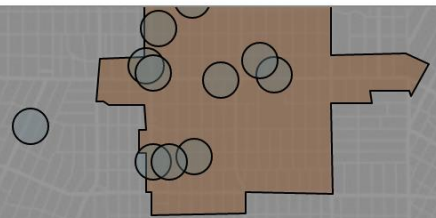
## Reimagining 6th Street



"Reimagine 6th Street" is a project to repurpose 6th Street in Koreatown from Normandie Ave. to Vermont Ave. for a public pedestrian plaza to support existing Koreatown community members and stakeholders. The goals of this project are three-fold: to provide open-space in Koreatown, reduce traffic violence, and boost existing small businesses.

"Reimagine 6th Street"는 한인타운의 6번가에 (Normandie Ave.과 Vermont Ave. 사이) 공공 보행자 광장을 조성하여 기존 한인타운 커뮤니티 구성원과 관계자를 지원하는 프로젝트입니다. 이 프로젝트의 목표는 한인타운에 열린 공간을 제공하고 자동차 사고를 줄이며 기존 중소기업을 돕는 것입니다.

"Reimaginar 6th St" es un proyecto para reutilizar 6th St en Koreatown de Normandie Ave. a Vermont Av. para una plaza peatonal pública para apoyar a los miembros de la comunidad de Koreatown y a las partes interesadas existentes. Los objetivos de este proyecto son tres: proporcionar espacios abiertos en Koreatown, reducir la violencia de tráfico e impulsar las pequeñas empresas existentes.



Yes 100%

90010

Total Responses: 5

Yes 100%





## Access to Opportunity: **Barriers** Faced by International Students From **Across U.S. Borders**



### Testimonies

Have you faced any challenges finding employment/internship opportunities in the US because of your immigration status?

Hover over a card to read more from a testimony.

"Yes, I have had trouble finding internships, especially as an engineer since a lot of the companies based in the US do not sponsor visas, and paid internships are merely impossible to find, with the only alternative being to take it as an internship class at UCLA over the summer, meaning I would have to pay tuition to intern rather than being paid."

"Yes, Visa issues"

"I have faced challenges because of my immigration status, because some companies do not sponsor my ability to work, especially when it is something I am very interested in."



You are invited to . . .

# Web Development and GIS for Social Change



## Final Presentations

June 10th, 2pm - 4pm PST

Join via Zoom: [tinyurl.com/21s-191a-finals](https://tinyurl.com/21s-191a-finals)

More Information: [tinyurl.com/21s-191-groups](https://tinyurl.com/21s-191-groups)

Featuring community stories from . . .

**Against Asian Hate** - Elderly Asian Americans during COVID-19 in California.  
Ana Gu, Adhavith Vijay, Rachel Chan

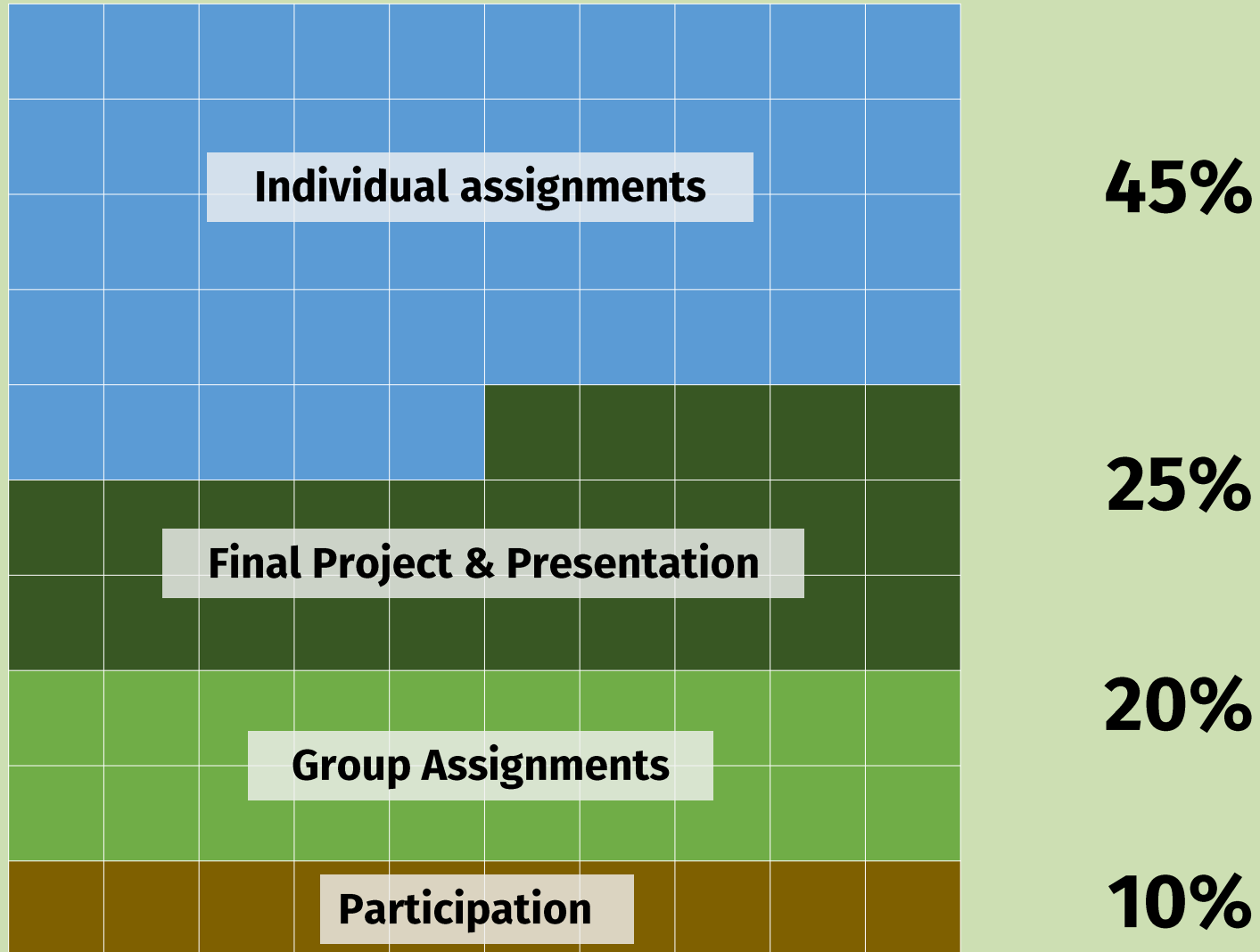
**Re-Imaging 6th Street** - Community insights into street pedestrianization in Ktown.  
Lauren Valles, Nina Long, Kathryn Greenler

**LA Tenants Survey** - Experiences about harrassment by landlords in LA.  
Sam Karakas, Ray Hsiao, Brian Zamora

**Food Equity** - Food insecurities & food services in West LA.  
Ericko Halim, Latisha Sumardy, Wilny Duong

**Mental Health** - Use and availability of mental health services at UCLA.  
Michelle Nguyen, Nathakin Leepreecha, Vanessa Ta

# Evaluation

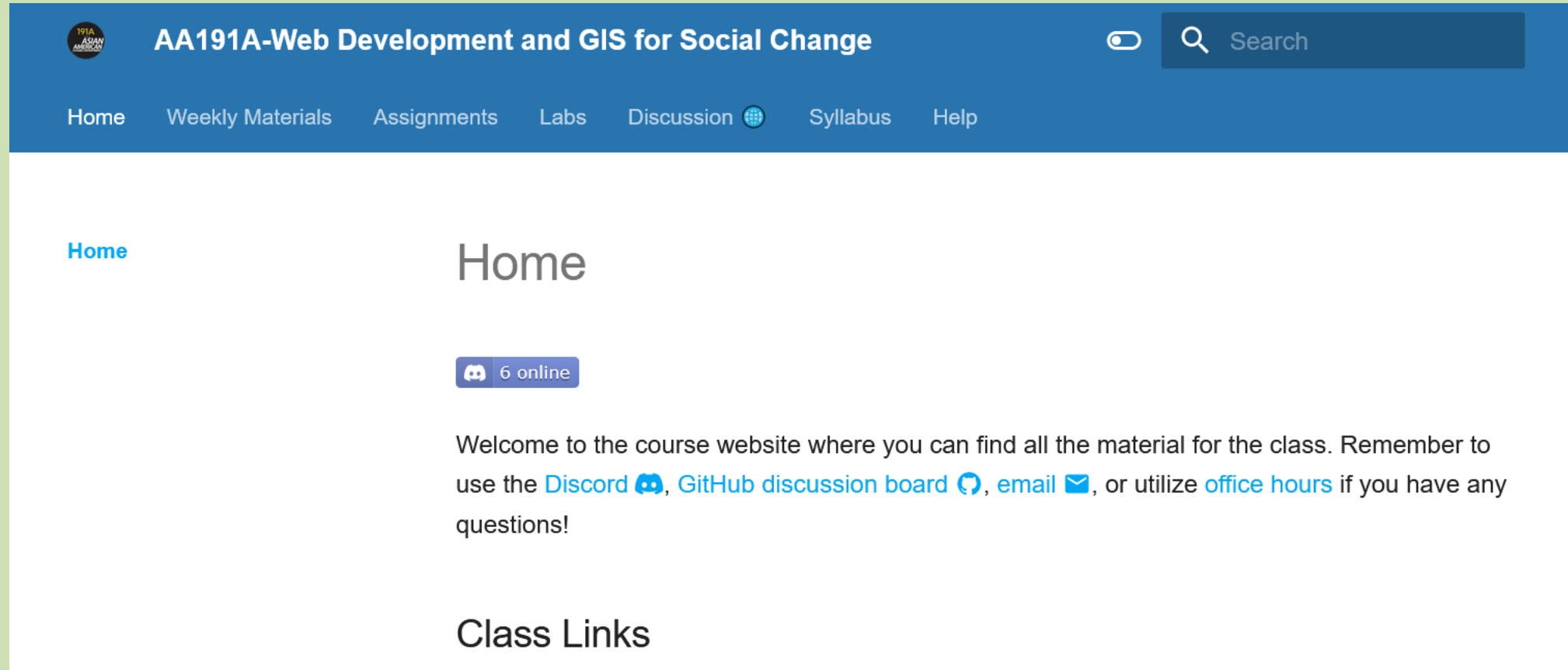





# **About the Course**

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Class website and syllabus

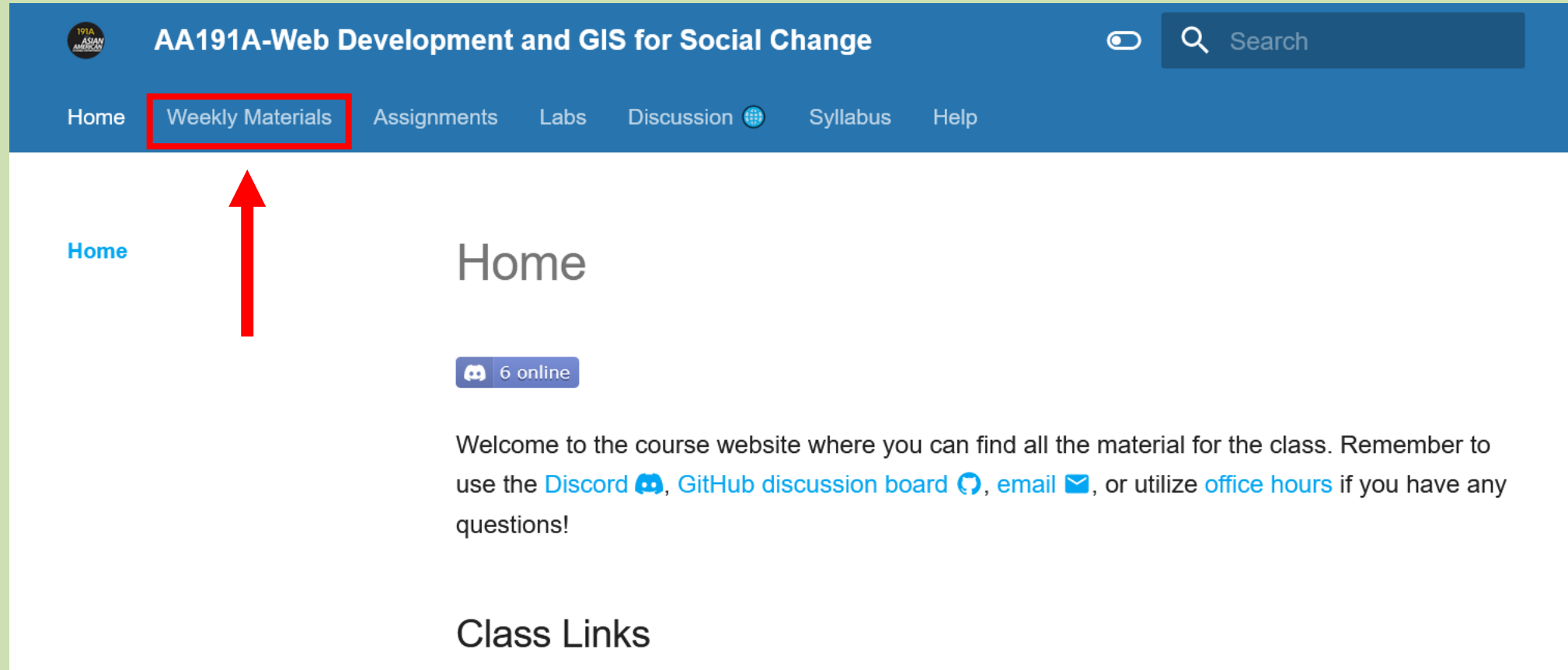
# We will be using GitHub exclusively



The screenshot shows the top navigation bar of a course website. The header is blue with the course title "AA191A-Web Development and GIS for Social Change" on the left, a search bar on the right, and a menu of links: Home, Weekly Materials, Assignments, Labs, Discussion (with a globe icon), Syllabus, and Help. Below the header, the main content area is white. On the left, there is a blue "Home" link. The main heading is "Home". Below it is a blue badge that says "6 online" with a Discord icon. The main text reads: "Welcome to the course website where you can find all the material for the class. Remember to use the [Discord](#) , [GitHub discussion board](#) , [email](#) , or utilize [office hours](#) if you have any questions!". Below this text is the heading "Class Links".

<https://albertkun.github.io/23S-ASIAAM-191A/syllabus/>

# Lost? Weekly Materials is your friend!



The screenshot shows the top navigation bar of the course website. The bar is blue and contains the course logo on the left, the course title "AA191A-Web Development and GIS for Social Change" in the center, and a search bar on the right. Below the title, a horizontal menu lists several options: "Home", "Weekly Materials", "Assignments", "Labs", "Discussion", "Syllabus", and "Help". The "Weekly Materials" link is highlighted with a red rectangular border, and a red arrow points upwards from the main content area towards this link. The main content area below the navigation bar is white and contains a "Home" link, a "6 online" status indicator, a welcome message, and a "Class Links" section.

191A ASIAN AMERICAN

AA191A-Web Development and GIS for Social Change

Home Weekly Materials Assignments Labs Discussion Syllabus Help

Home

6 online

Welcome to the course website where you can find all the material for the class. Remember to use the [Discord](#), [GitHub discussion board](#), [email](#), or utilize [office hours](#) if you have any questions!

Class Links

**Weekly materials** is your reference for the week!

# Weekly Materials has it all!

191A ASIAN AMERICAN

## AA191A-Web Development and GIS for Social Change

Home Weekly Materials Assignments Labs Discussion Syllabus Help

Search

GitHub ☆2 🍷0

### Weekly Materials

Summary

[Week 1 - GIS, Data, and Ethics](#)

## Week 1 - GIS, Data, and Ethics

Date	Type	Description	Slides	Recording
4/4	Lecture	Introducing the course, GIS, data, and ethics		
4/6	Lab	<a href="#">GITting Used to Web Development and JavaScript</a>		

**Lecture**  
Introducing the course, GIS, data, and ethics

**Lab**  
Group Work  
Getting Started help

**Assignments**  
Due Tuesday 4/4  
Due Thursday 4/6  
Due Tuesday 4/11

Links to the slides, recordings, lab, and upcoming assignments



# Course Outline

Week	Lectures	Labs
4/4	GIS, Data, Ethics	GitHub, HTML, CSS, JavaScript
4/11	Critical Cartography and Civil Society	HTML, CSS, JavaScript
4/18	Open Source and Web Mapping	HTML, CSS, JavaScript
4/25	Web Developing for Civil Society	HTML, CSS, JavaScript
5/2	Society, Technology, and Ethics	HTML, CSS, JavaScript
5/9	Human-Centered Design	GitHub and HTML, CSS, JavaScript
5/16	Communication Design for Social Change	HTML, CSS, JavaScript
5/23	Mentorship and Collaboration	HTML, CSS, JavaScript
5/31	Connecting Activism and Technology	HTML, CSS, JavaScript
6/4	Beyond Web Development and Social Change	HTML, CSS, JavaScript

 = Visiting Voice

# Course Software Requirements\*



**git**

– completing assignments



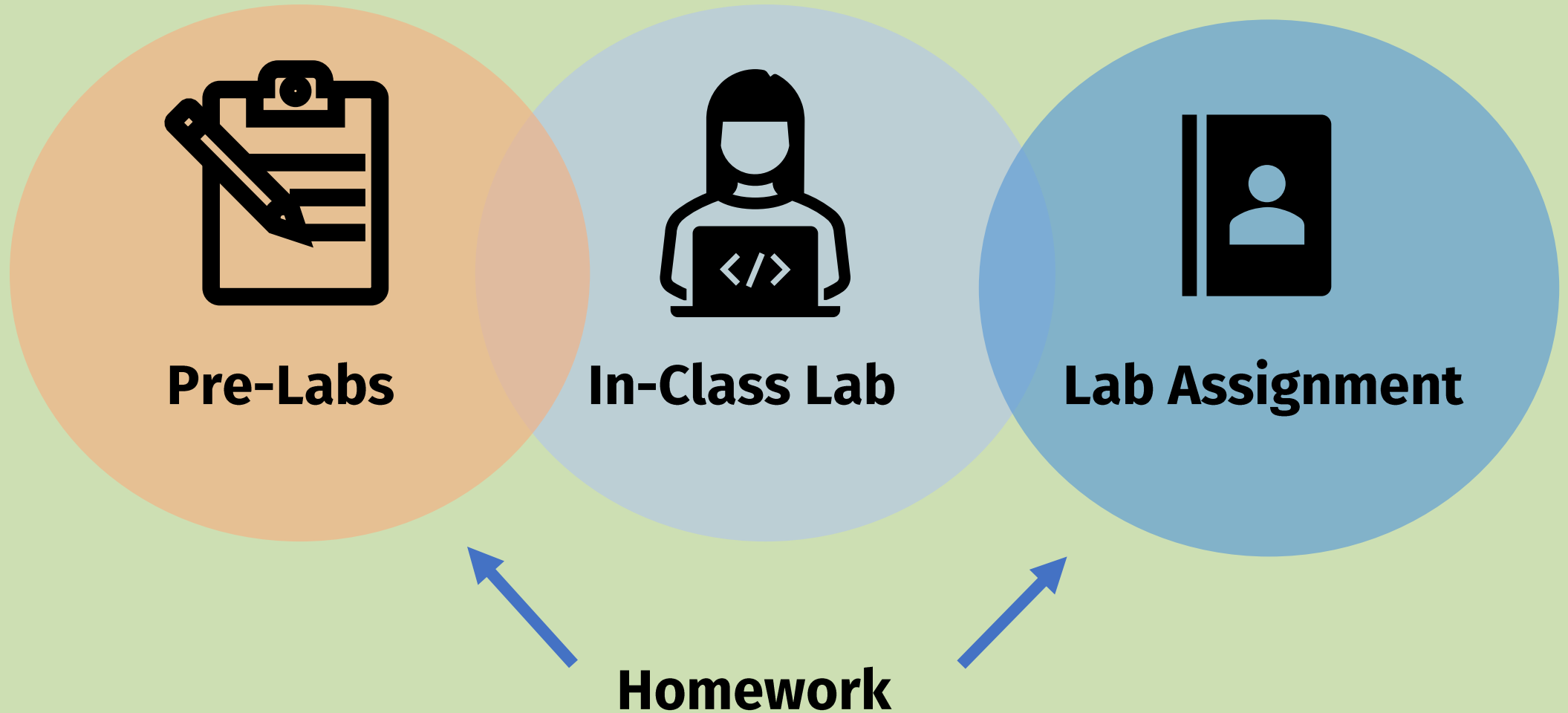
**VS Code** – writing code



**Firefox** – web debugging

**\* You may freely use other software, but it will not officially be supported**

# Labs



# Try to avoid this situation:



**Get help early and often!**

# Places to get help

- **Search online**

[StackOverflow.com](https://stackoverflow.com)

- **Ask the class!**

- **Discord**

<https://discord.gg/awktuEcAqW>

- **GitHub Discussions**

<https://github.com/albertkun/23S-ASIAAM-191A/discussions/>

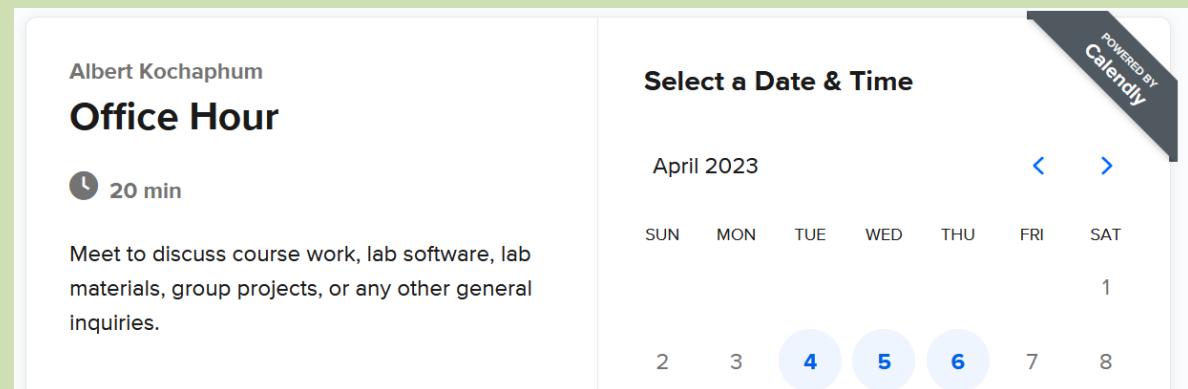
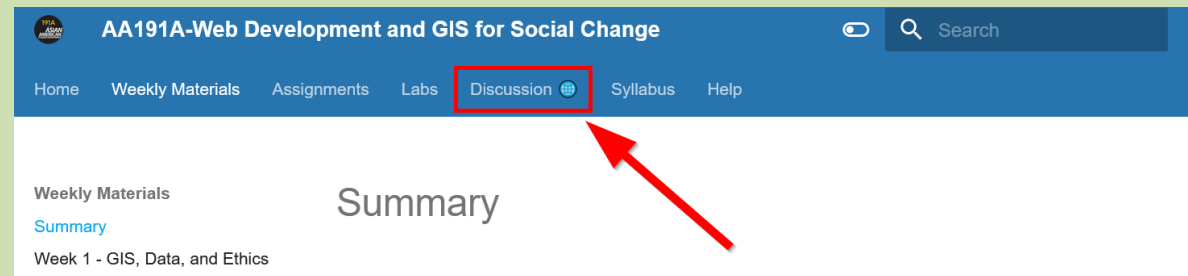
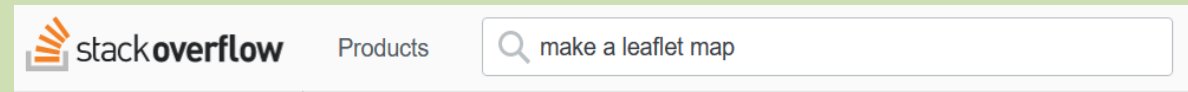
- **Drop by office hours**

- [After class](#)

- [Online: https://calendly.com/aa191a/office-hours](https://calendly.com/aa191a/office-hours)

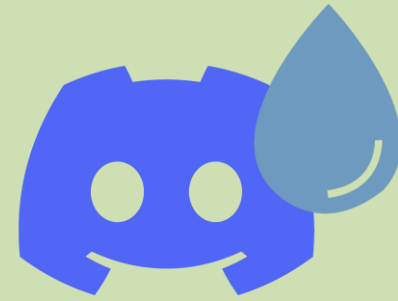
- **Email the instructor**

[albertkun@oarc.ucla.edu](mailto:albertkun@oarc.ucla.edu)



# Discord(er)ly Conduct

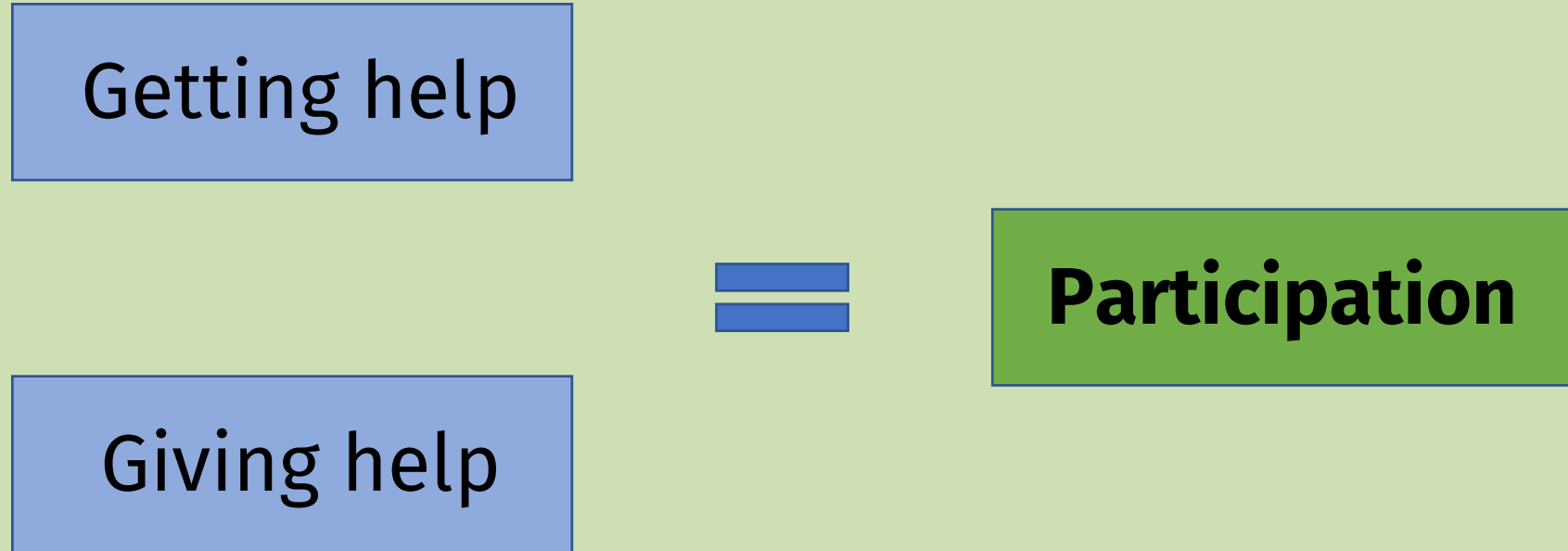
- **Use appropriate channels**
- **Use your real name**
- **Respect others time  
(don't expect a quick response)**



**If you don't post in the right place or use your name,  
I cannot give you credit for participating!**



# Goals for helping



**Trying to create an active learning environment for everyone.**

# Core Principles in summary:



# **About the Course**

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Questions?

# GIS, Data, and Ethics

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Welcome

**GIS**

**Data**

**Ethics**

**Discussion**

**Assignments**

Albert Kochaphum  
Lecture 1 | April 4<sup>th</sup>, 2023

# GIS, Data, and Ethics

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GIS



**GIS**

**Data**

**Ethics**

**Discussion**

**Assignments**

# **What is GIS?**

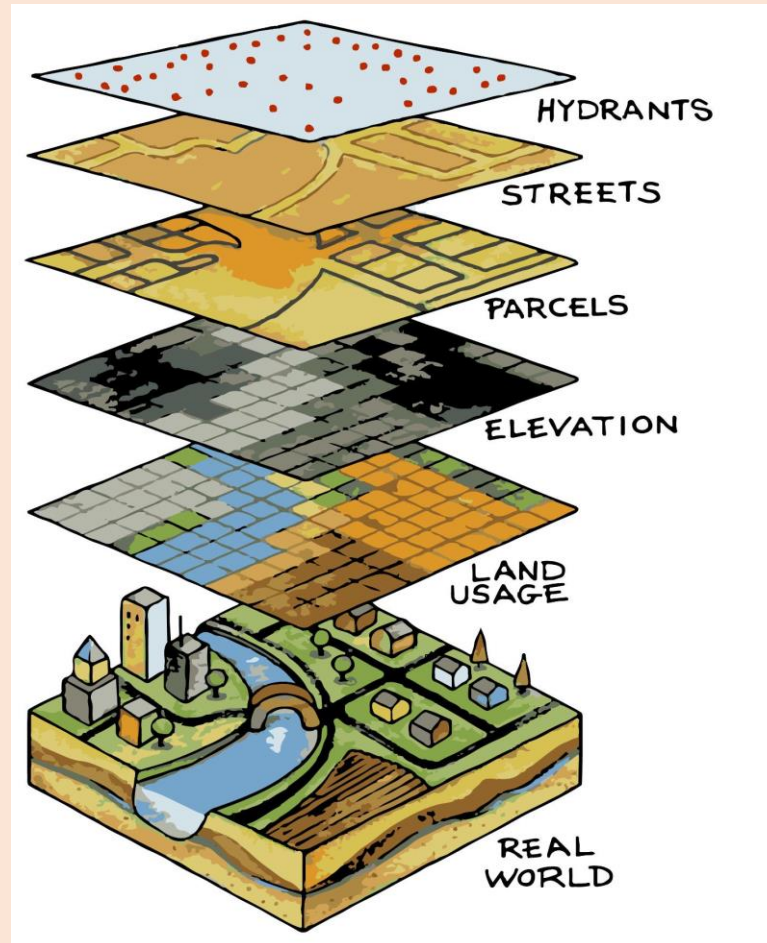
**A) Geographic Information Systems**

or

**B) Geographic Information Science**

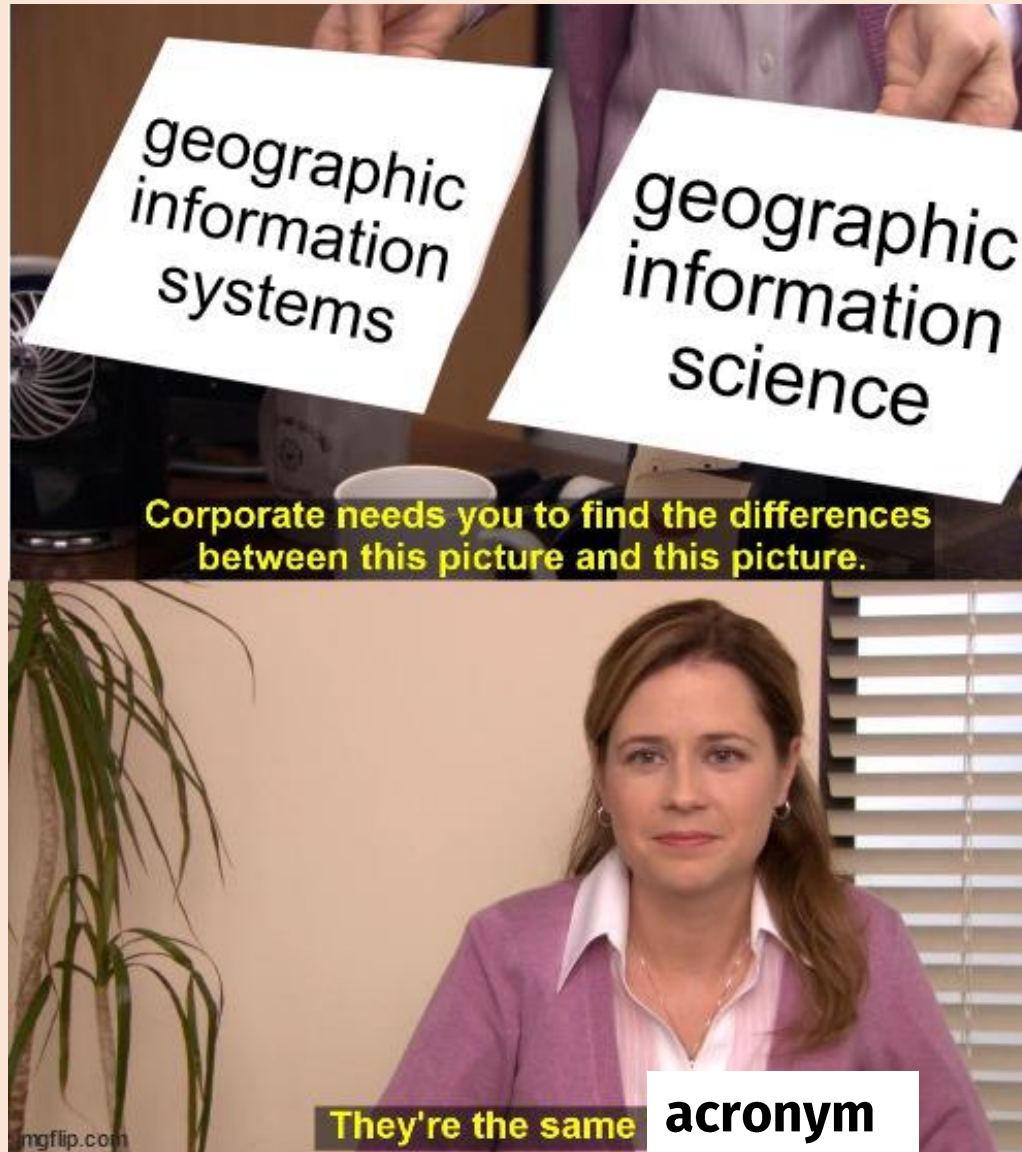


# What is GIS?



With GIS, data is layered with time and space

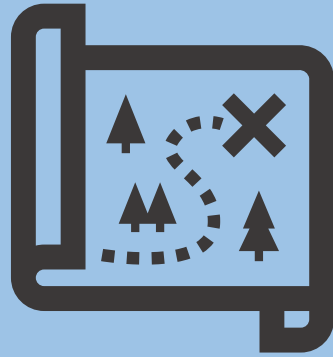
# What is GIS?



# What is GIS?

**GISystems**

=



**Spatial tools**

**GIScience**

=



**Spatial thinking**

# Examples of GIS

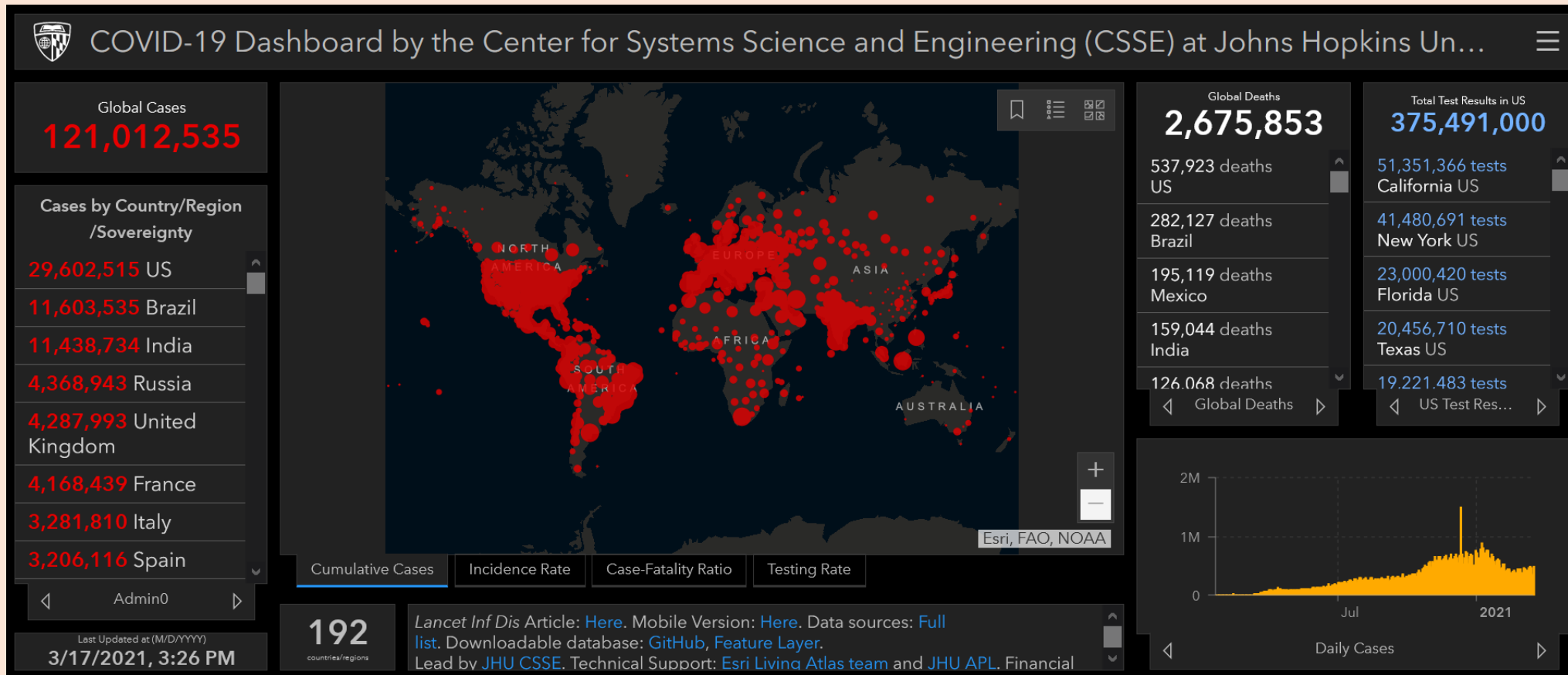
The screenshot displays the Google Maps interface for a transit route. The left sidebar contains the following information:

- Origin: Los Angeles International Airport
- Destination: University of California, Los Angeles
- Departure time: Leave now
- Warning: Public transport services are modified due to COVID-19.
- Warning: Wearing a mask on public transport is required due to COVID-19.
- Option: Send directions to your phone
- Transit details: 4:13 PM–5:20 PM, 1 hr 7 min, CC 6 / CC 6R, 4:30 PM from LAX Transit Center Bay 11, \$1.00, 21 min, every 12 min.

The main map shows a route starting at LAX Transit Center Bay 11 and ending at the University of California, Los Angeles. A transit box indicates a 4:30 PM departure on the CC 6 line. The total travel time is 1 hr 7 min, with a frequency of every 12 min. The map includes a satellite view inset and a Google logo.

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

# Examples of GIS



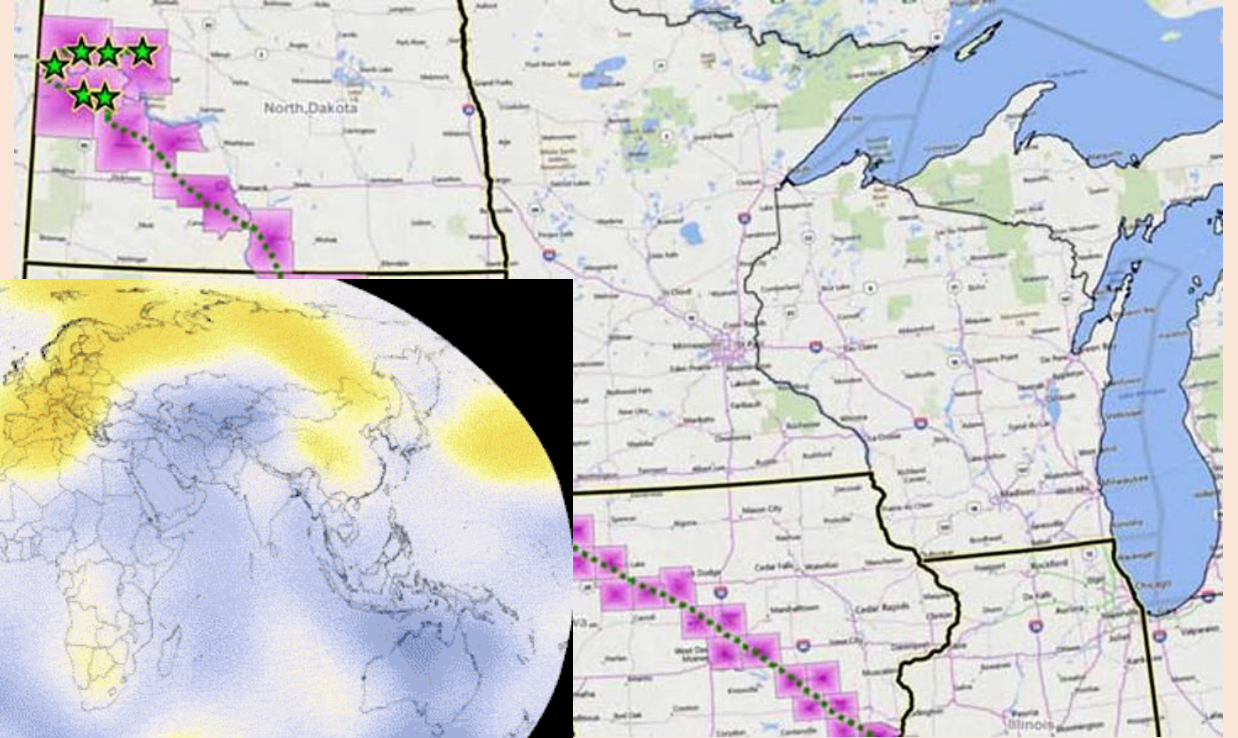
Johns Hopkins University COVID-19 Dashboard, <https://systems.jhu.edu/>



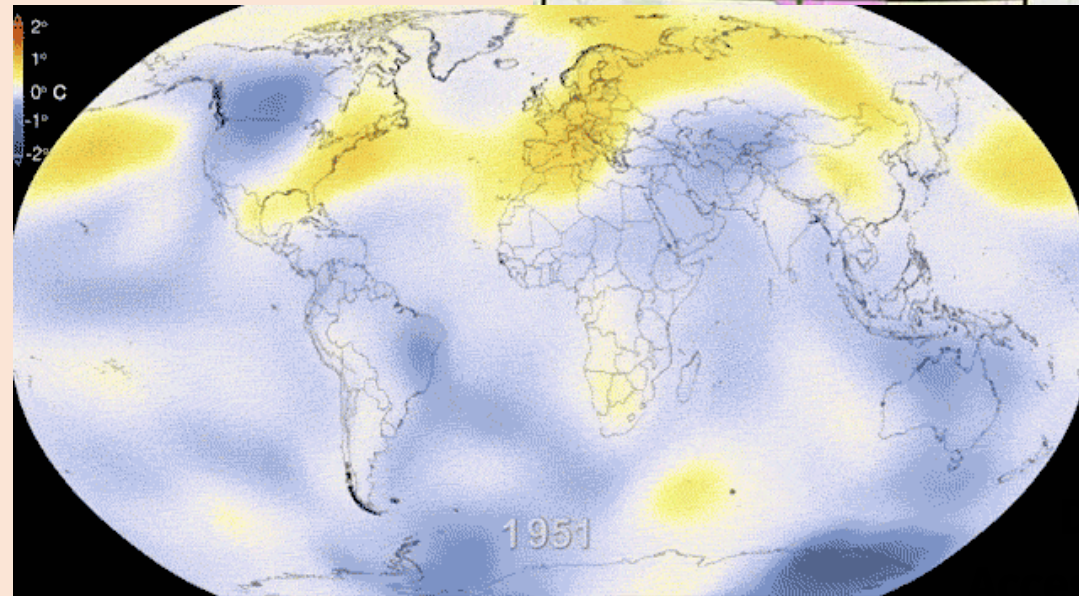


# GIS exists in various forms

It can disempower



It can empower



Global Temperature Increase

akota  
s Pipeline



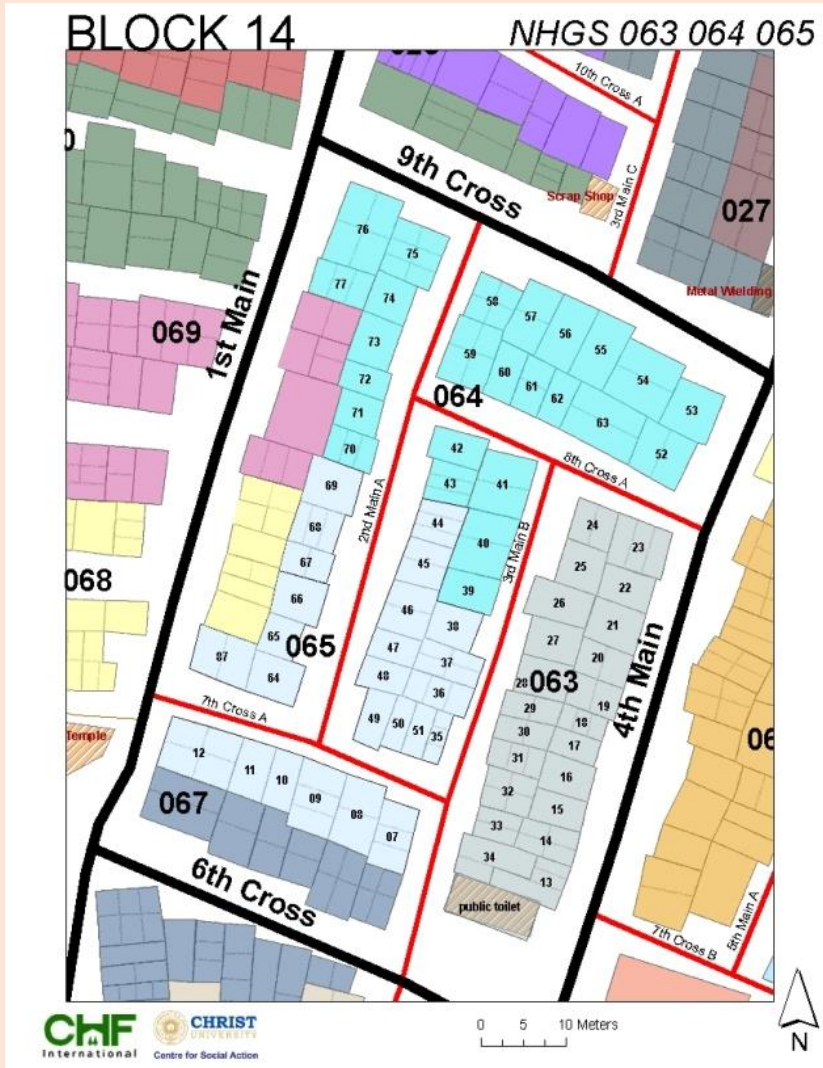
# Participatory GIS/Community-Based GIS

	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			

**Our Focus**



# Participatory GIS/Community-Based GIS



# GIS, Data, and Ethics

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Data

**GIS**

**Data**

**Ethics**

**Discussion**

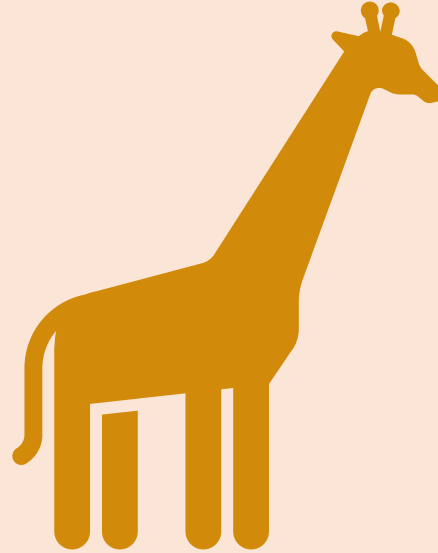
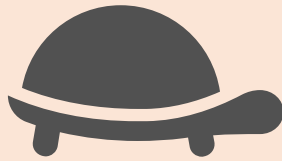
**Assignments**

# Types of Data





# Types of Data



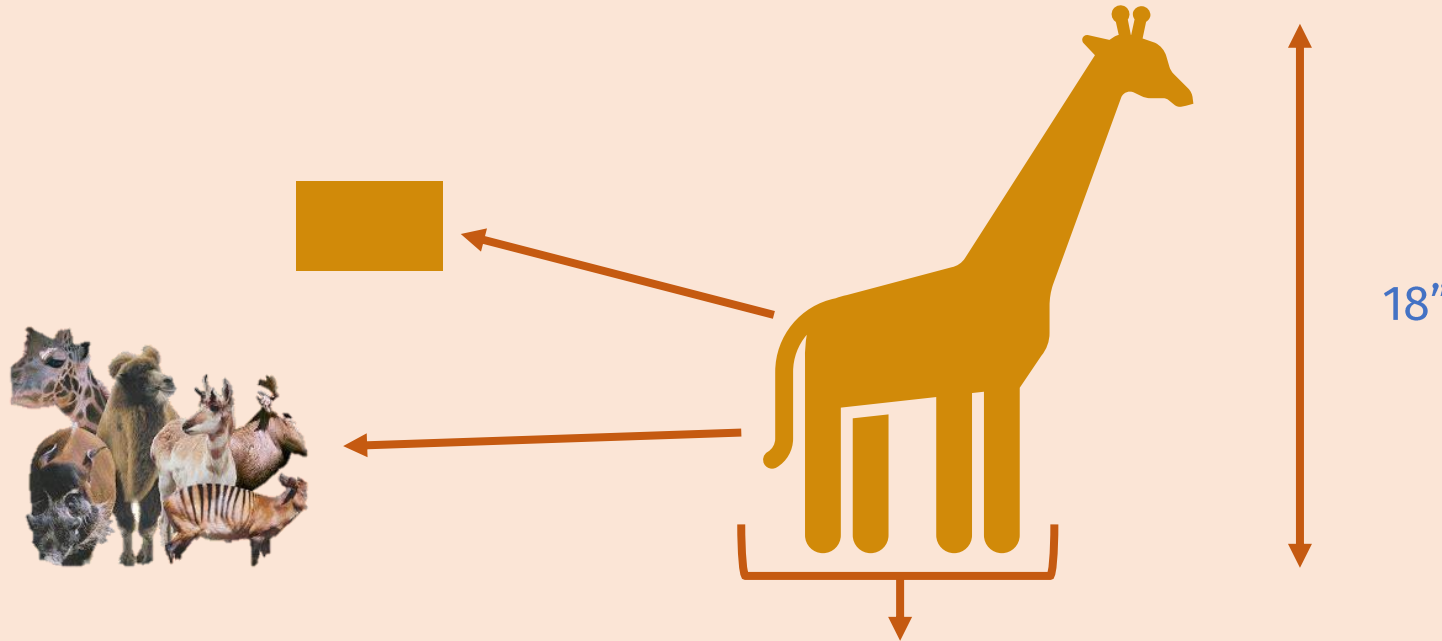
## Qualitative

- Data that describes the **qualities** of something

## Quantitative

- Data that can be summarized into **quantities**.

# A giraffe reference point for data types



## Qualitative

- Color (**Yellow**)
- Species order (**Artiodactyla**)
- Species odor (**pleasant**)

## Quantitative

- Height (**5.5 meters**)
- # of legs (**4 legs**)
- Taller than Data? (**Yes**)

# Applying our knowledge!

## Pre-Course Survey for AsianAm-191A!

Please fill out this survey for "AA-191A: Web Development and GIS for Social Change" at your earliest convenience but **no later than the first day of class (4/4/2023)**. **No programming experience is necessary** for this course and this survey will be used to partner you up with other students based on your skills and subject of interest. Additionally, some of your answers will be summarized to help us learn about each other in the first week.

Remember to check the syllabus to learn more about the course before responding:  
<https://albertkun.github.io/23S-ASIAAM-191A/syllabus/>

Responses are anonymous. An asterisk (\*) indicates mandatory questions.

**Full Name \***

How would you like to be referred to? 🙋




Enter your answer

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



# Applying our knowledge!

**What department, major, or field of concentration are you? \***

  You can also share if you have a minor or double major 🧐 

Enter your answer

**Please share something about your background and/or interests. \***

This can be hobbies or things you enjoy! 🎮 🎸 🌱 🐱

Enter your answer

**What are your goals after graduating UCLA? \***

Can be as brief or long as you'd like! 🗨️ 🎓

Enter your answer

**Qualitative**

**What is your experience with civil society? \***

- None, isn't society already civil?
- Some, I have done things like volunteering at a non-profit before
- Lots, I put the PRO in protests.

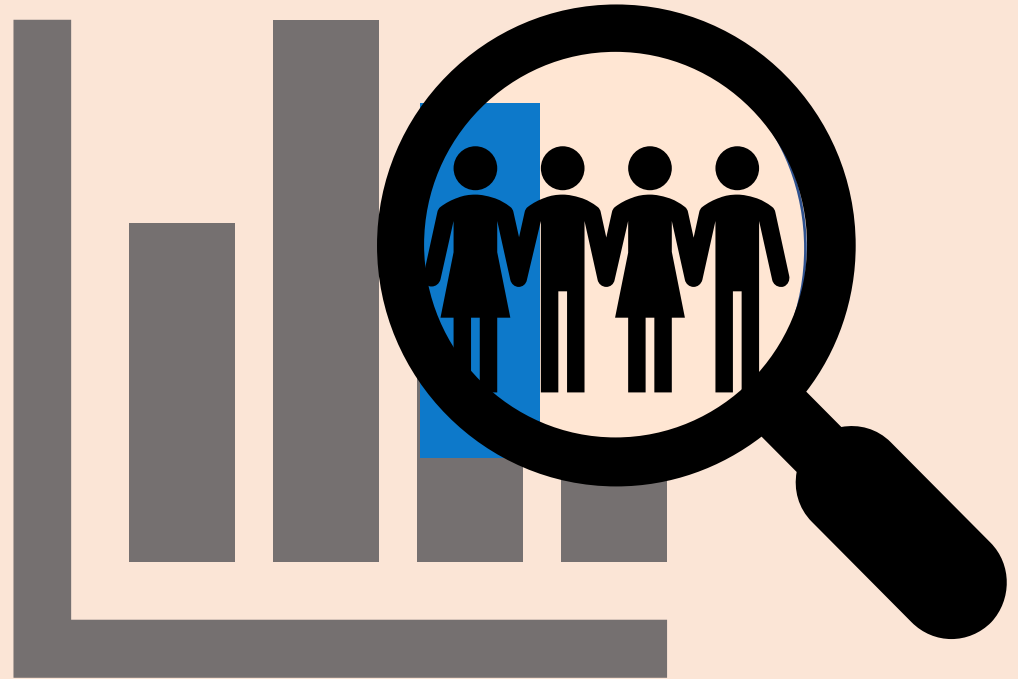
**What is your familiarity with GIS? \***

- None, the course title was the first time I heard about GIS
- Some, I got the GIST of it and I can make some maps
- Lots, I'm a spatial GenluS!

**Quantitative**

**Both qualitative and quantitative!**

# Critical Data Studies



# Is Data perfect for solving social problems?



**No!**

**In doing so, you assume social problems are:**

Knowable

Controllable

Rational

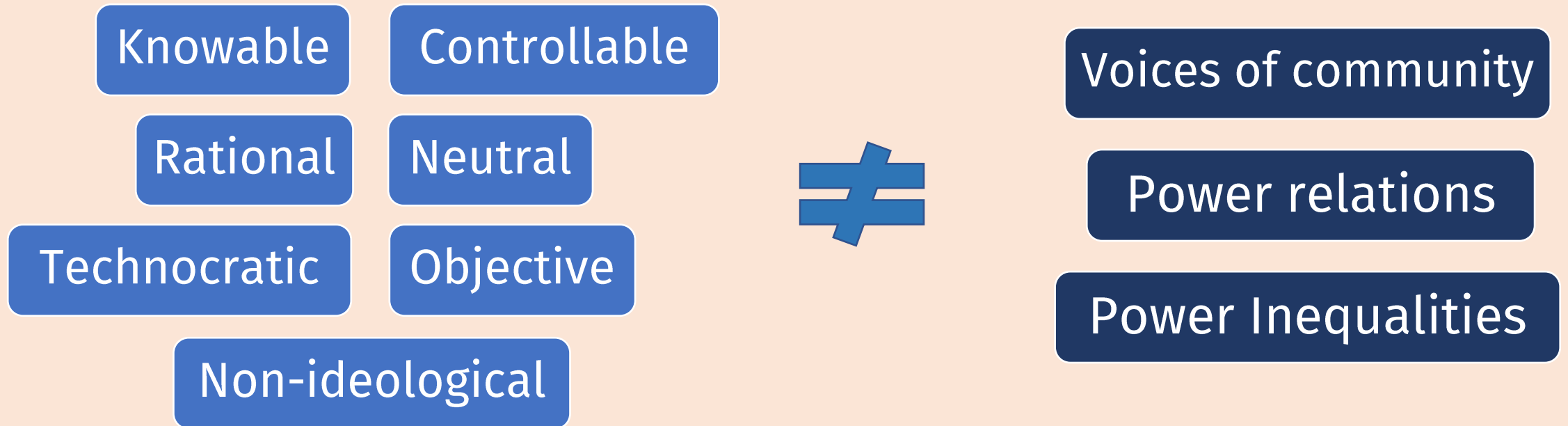
Neutral

Technocratic

Objective

Non-ideological

# Effects of a data only approach



**Neglects those directly impacted by social problems.**

# Alternative data forms:

The screenshot shows the OpenStreetMap website interface. At the top right, there is a navigation menu with links for "Data Catalog", "Geohub", "Blog", "Developer Resources", and "About", along with social media icons for Facebook and Twitter, a search icon, and a "Sign In" button. Below this is the "Humanitarian OpenStreetMap" logo and a secondary navigation menu with links for "WHAT WE DO", "OUR WORK", "TOOLS & DATA", "NEWS", "COMMUNITY & ORGANIZATION", "PARTNER WITH US", and "GET INVOLVED". The main content area features the "OpenStreetMap" logo, a search bar with the placeholder text "Search" and "Where is this?", and buttons for "Go" and a share icon. Below the search bar, a map is partially visible.

## Mapping Hate Crimes in the US #OneHateCrimelsTooMany

[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

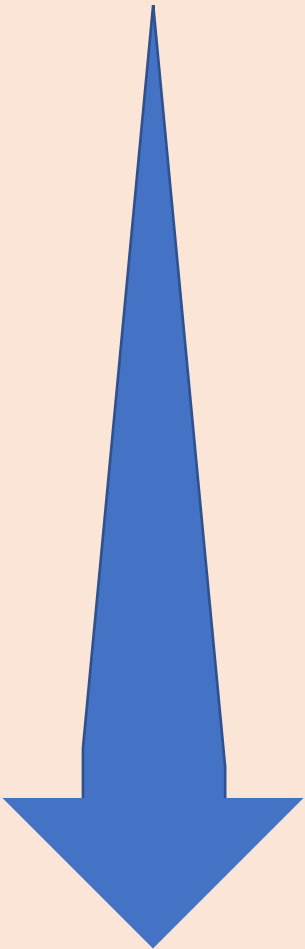
NEXT

### 2 Date of Harassment



# Alternative data forms:

More Community based



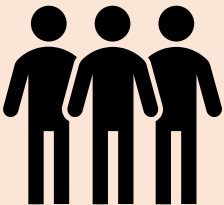
**Open Data**



**Humanitarian**



**Crowdsourcing**



**Participatory**



**Our  
Focus**



# GIS, Data, and Ethics

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Ethics

**GIS**

**Data**

**Ethics**

**Discussion**

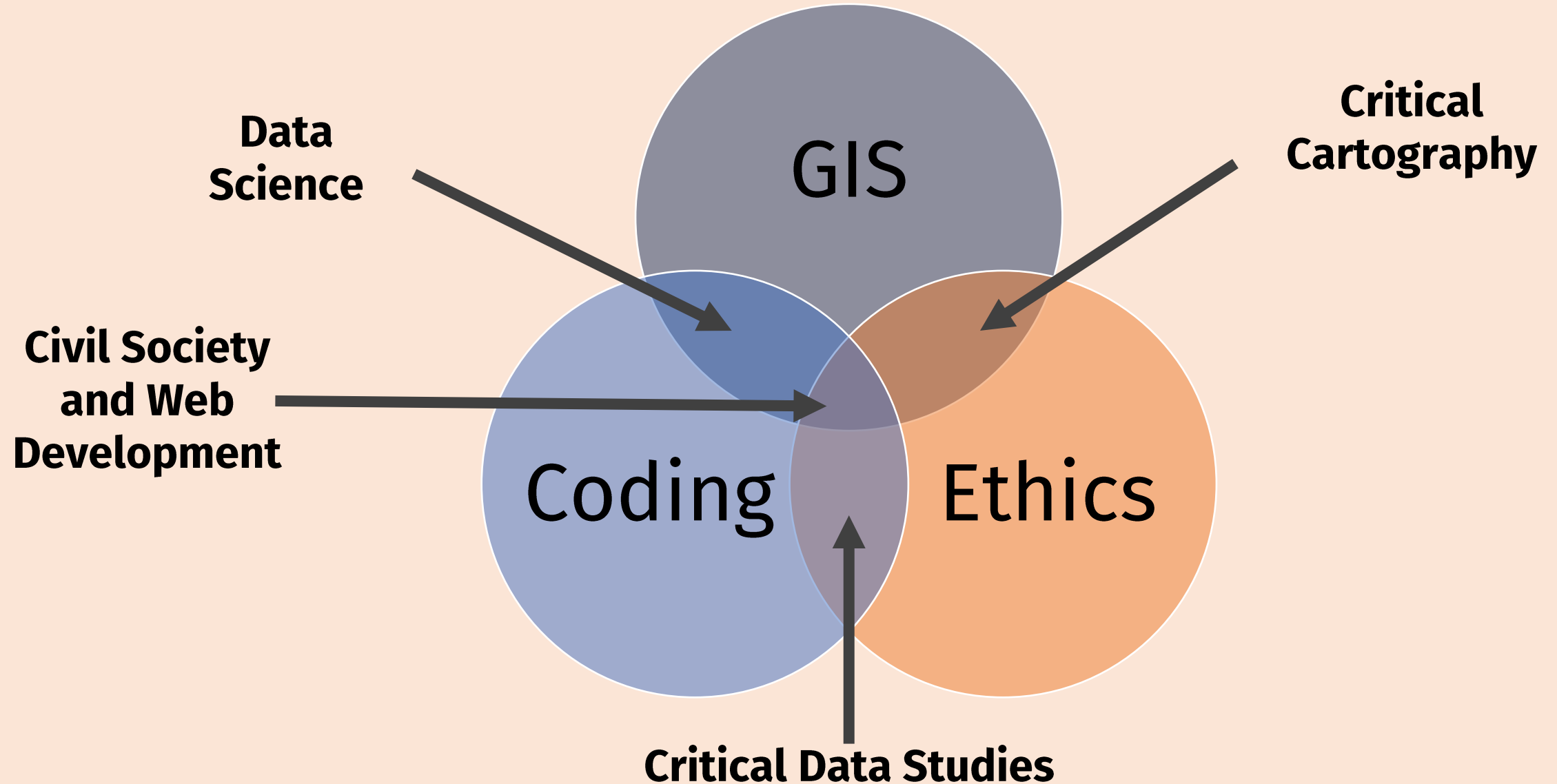
**Assignments**

# 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

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“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.

# GIS, Data, and Ethics

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Discussion

**GIS**

**Data**

**Ethics**

**Discussion**

**Assignments**



# What are your ethics when it comes to using technology?

- In what ways should 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/23S-ASIAAM-191A/discussions/1>

# GIS, Data, and Ethics

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Assignments

**GIS**

**Data**

**Ethics**

**Discussion**

**Assignments**

# Assignments

# Complete the following:

## Due Thursday 4/6:

1. [Pre-Lab](#)

## Due Tuesday 4/11:

1. [Weekly Reading #1](#) (10 – 20 minutes)
2. [Thinking Cap #1](#)

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