




Web Development and GIS for Social Change

Critical Data for Transforming Civil Society

Join at
slido.com
#ucla

Albert S. Kochaphum
Week 1 | March 28th, 2022

Please fill in the survey

 Start presenting to display the poll results on this slide.

How are you feeling?



Today's Agenda

Introductions

Course details

Lecture

Discussion

Wrap-up



Introductions



About me!

GIS + code = ftw

bikeclist

can we haz
more social equity?

made in san francisco

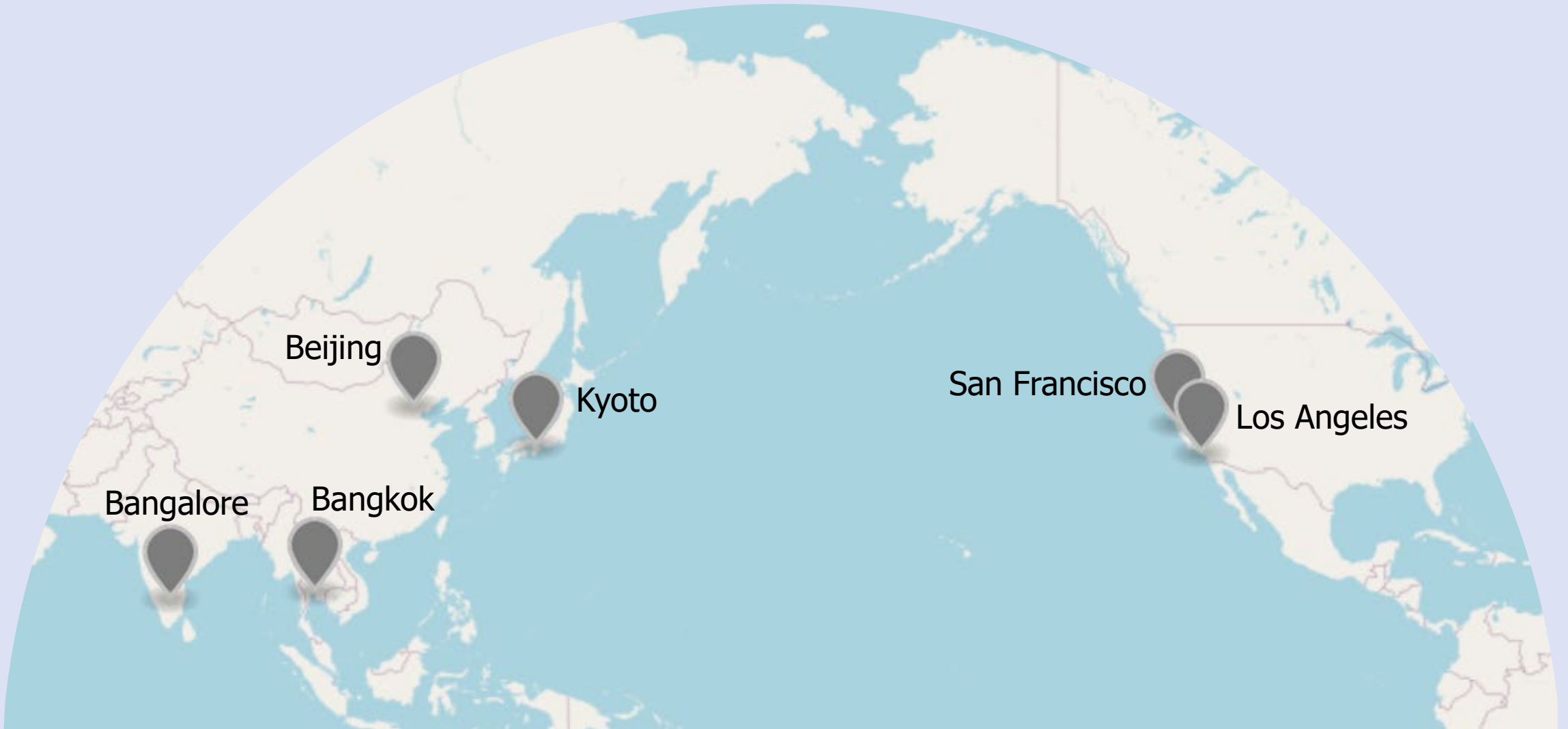
omg, climate change :(

wow! Much tarrible puns

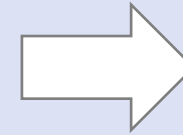
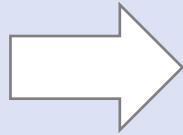
noob @ game dev



About me personALLY



About me “profession**AL**ly”



wHAT that really means is...



I wear many **HATs**









Jane Map

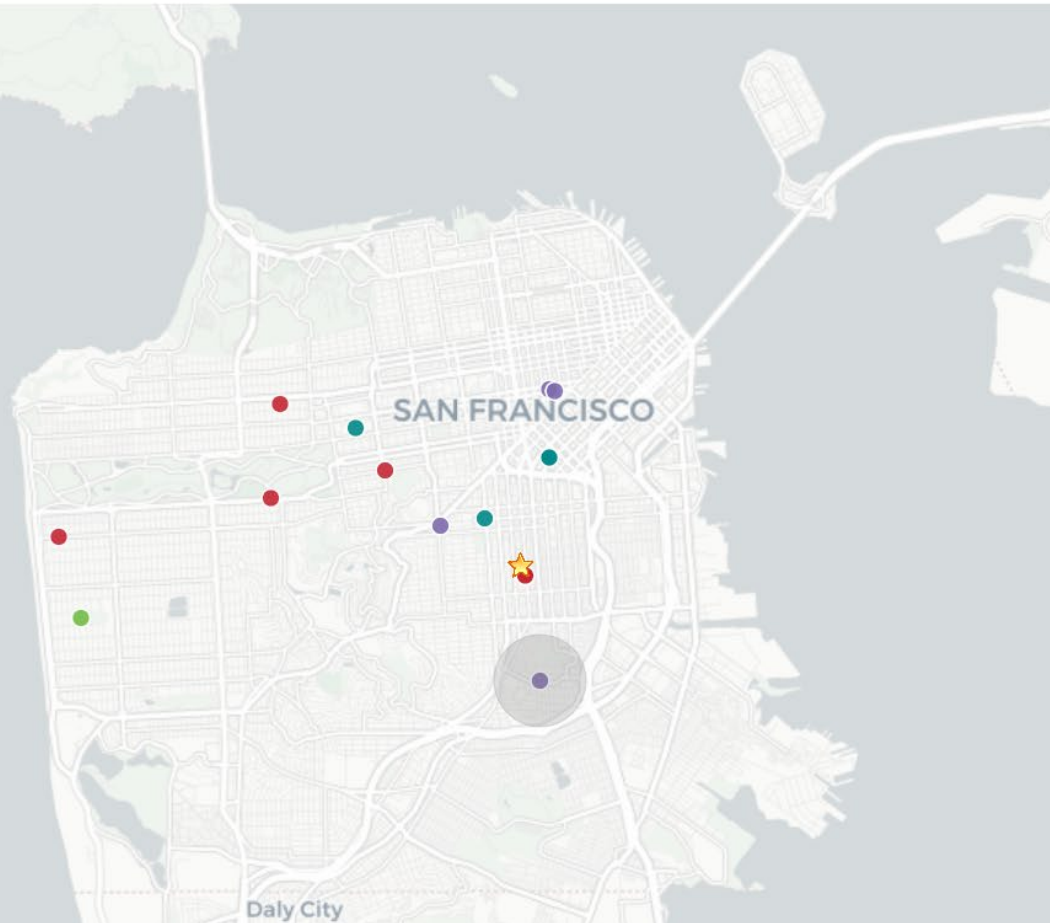
Let's get started on electing a progressive mayor for San Francisco.

Share

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

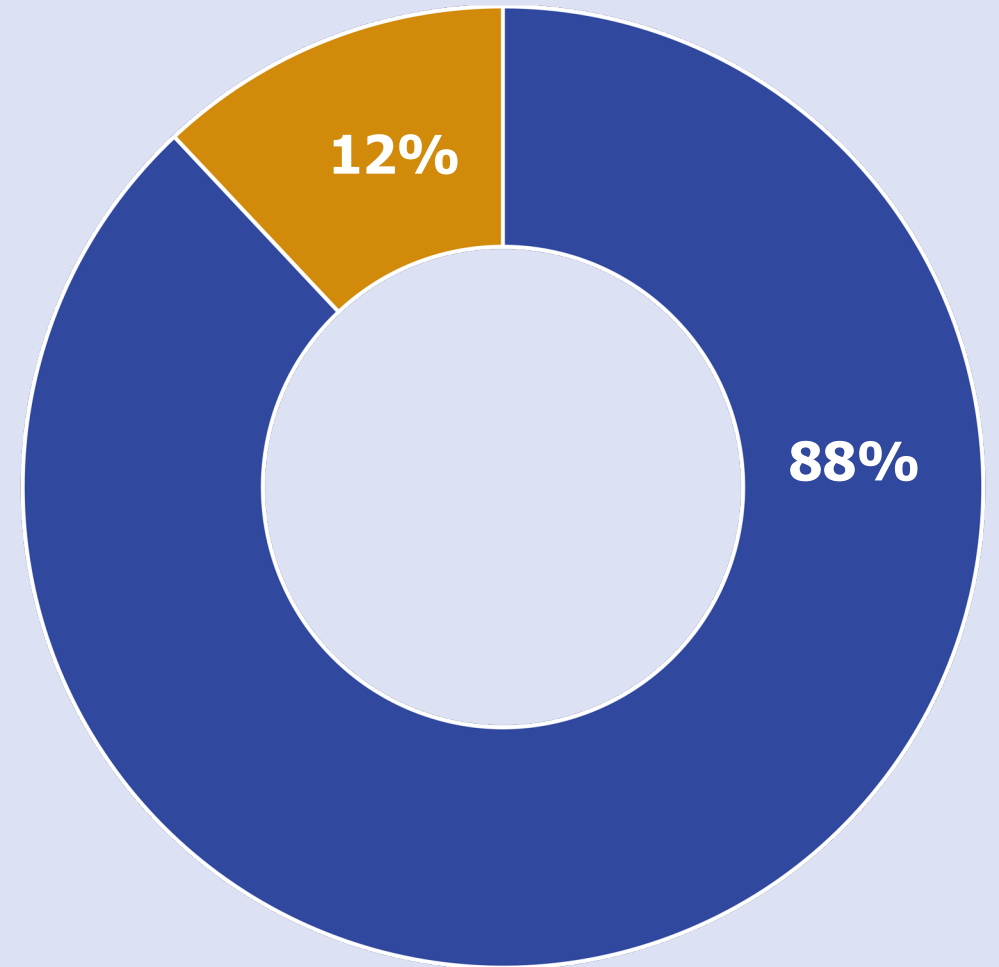
RSVP

Get Directions

What type of web application we will be making!

About you!

Enrolled Student Status

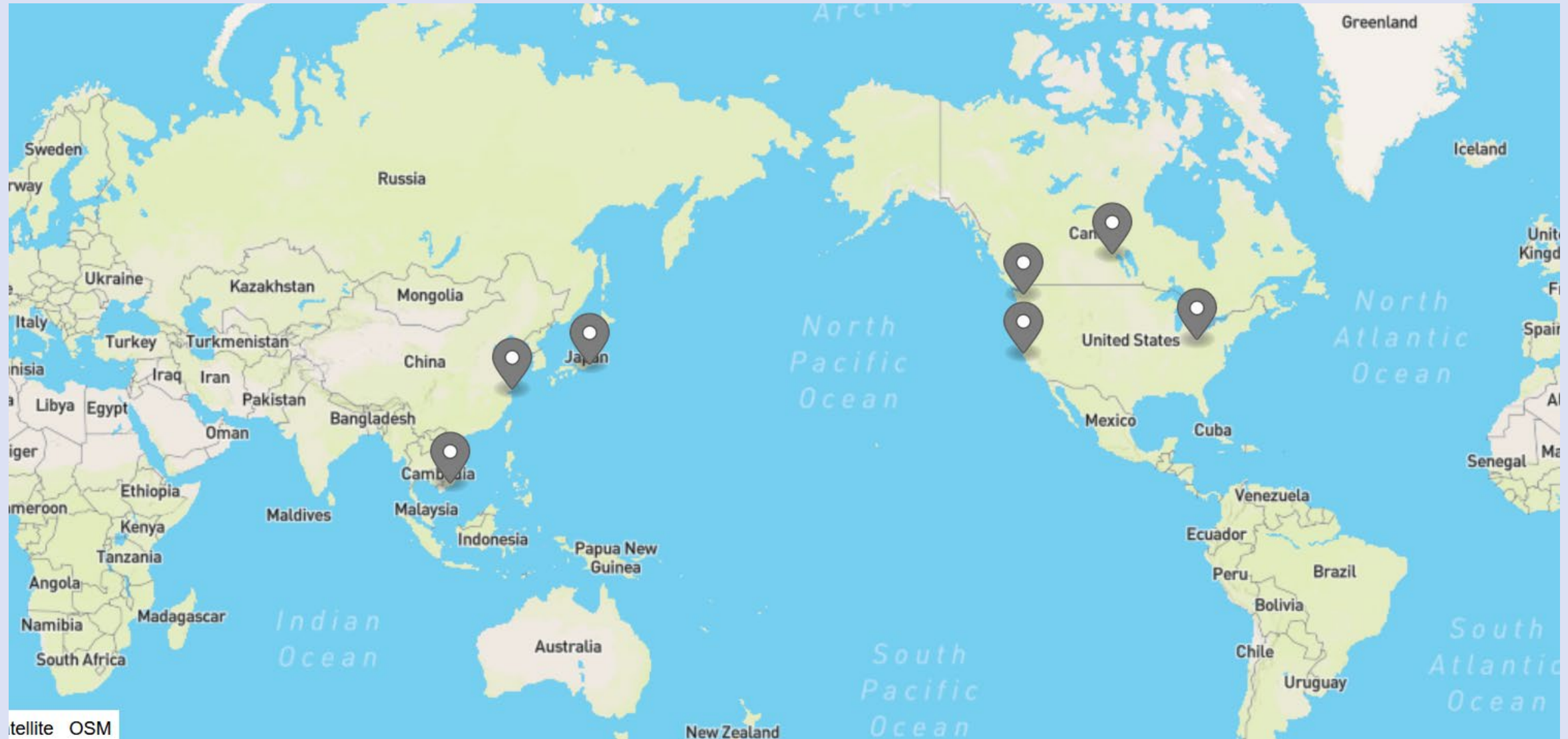


Graduate Students



Undergraduate Students

About you!



About you!

A word cloud visualization of text data. The words are arranged in a dense, overlapping cluster. The colors of the words vary, including shades of purple, blue, green, and pink. The words represent various aspects of identity, experience, and geography.

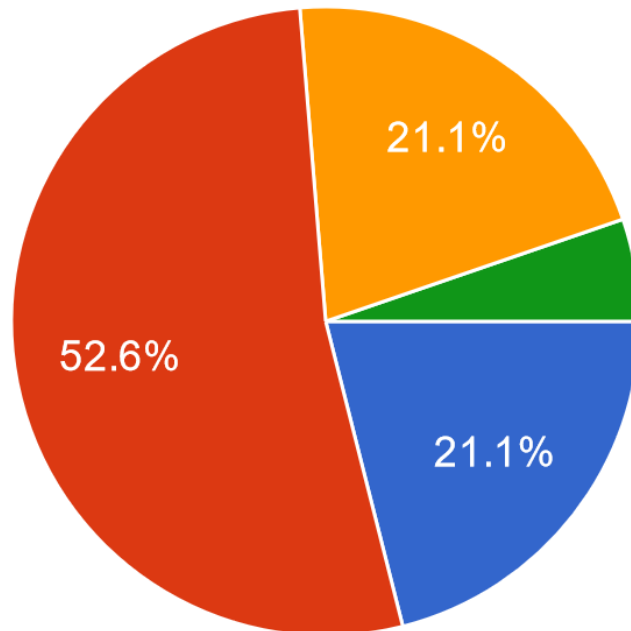
Words included in the cloud:

- permanent
- first
- alone
- chinese
- immigrant
- interested
- parents
- born
- maryland
- change
- grew
- mapping
- states
- years
- trying
- study
- second
- japan
- several
- social
- generation
- love
- new
- order
- canada
- mother
- younger
- gis
- school
- shanghai
- age
- american
- united
- english
- sometimes
- ohio
- japanese-american
- shopping
- stayed
- middle
- india
- moved
- spent
- foods
- part
- problems

About you! Web Development

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

19 responses

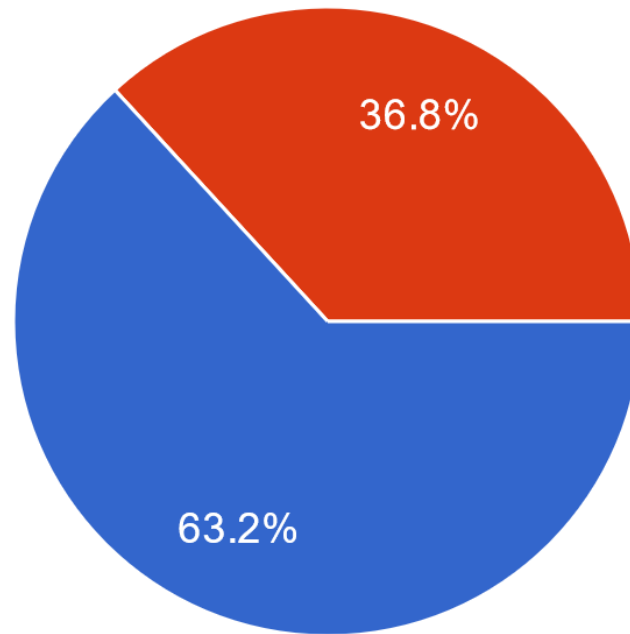


- I have no experience, so I cannot say.
- Some, I have written code before, but it's kind of intimidating.
- Pretty comfortable, I enjoy it.
- 0110100100100000011010110110111...

About you! GIS

What is your familiarity with GIS?

19 responses

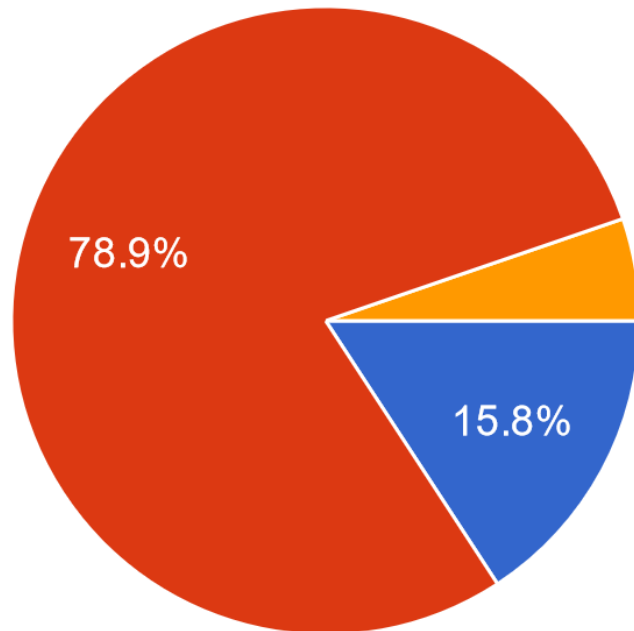


- None, the course title was the first time I heard about GIS
- Some, I got the GIST of it and I can make some maps
- Lots, you can say I am a spatial master of GI-Saster!!

About you! Civil Society

What is your experience with civil society?

19 responses

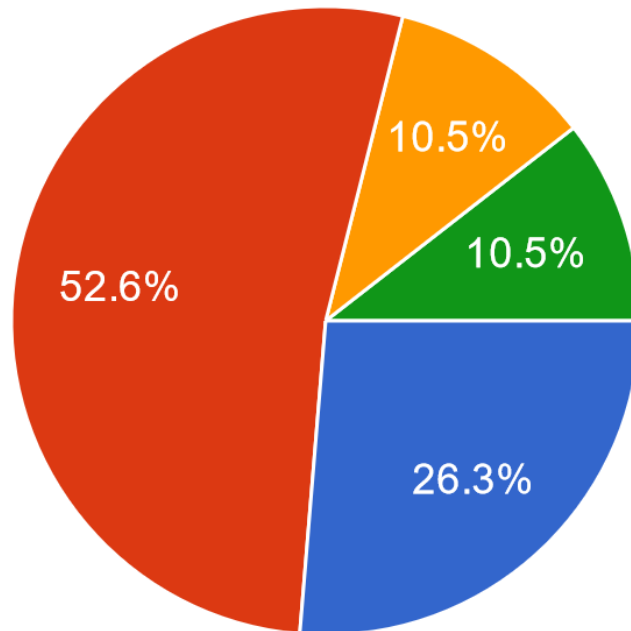


- None, isn't society already civil?
- Some, I have done things like volunteering at a non-profit before
- Lots, you can say I put the PRO in protests.

About you! Data

What is your familiarity with cleaning data?

19 responses



- None, is that cleaning a Star Trek character?
- Some, I've cleaned up data before and made some charts
- Lots, you can find spreadsheets on my toast because they are my jam.
- None, is that a Star Trek character?

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



Acquire technical web development skills relevant to mapping for civil society

HTML

CSS

JavaScript



Apply an ethical framework to mapping projects

Civic
Engagement

Critical
Cartography

Learning objectives summarized:

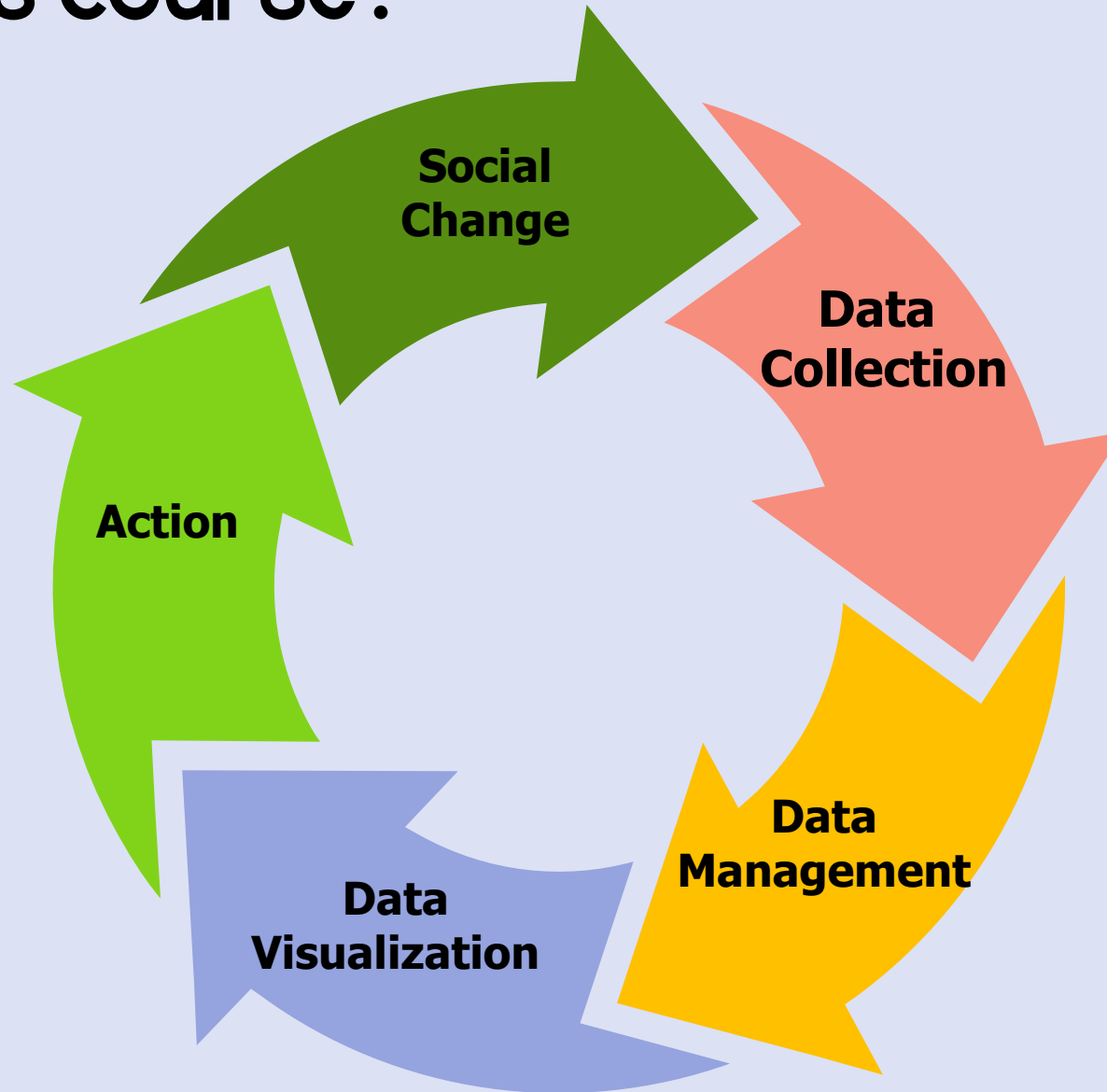
I HAVE NO IDEA WHAT I AM DOING





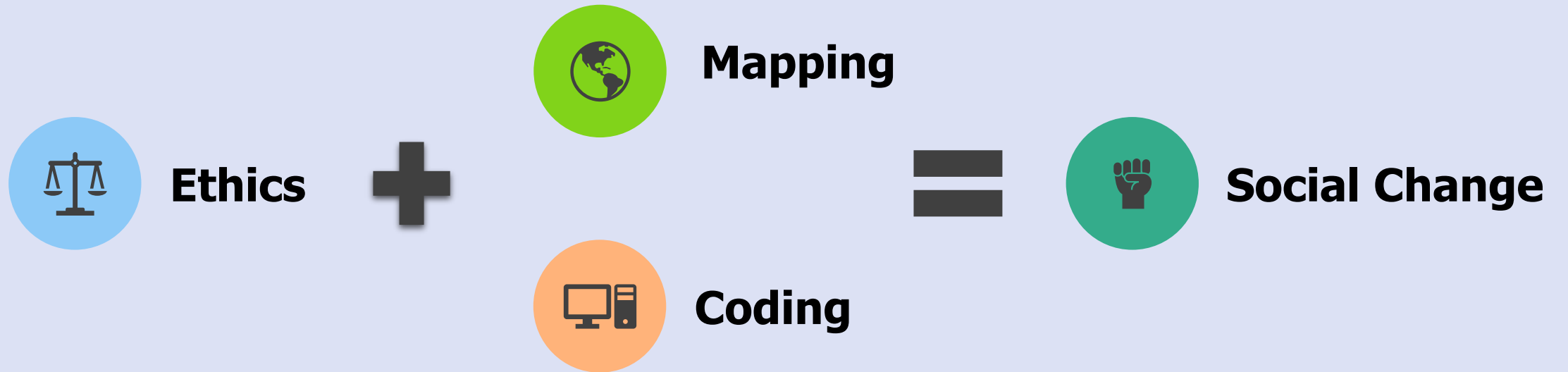
THIS ISN'T SO RUFF

What is this course?



It's a process

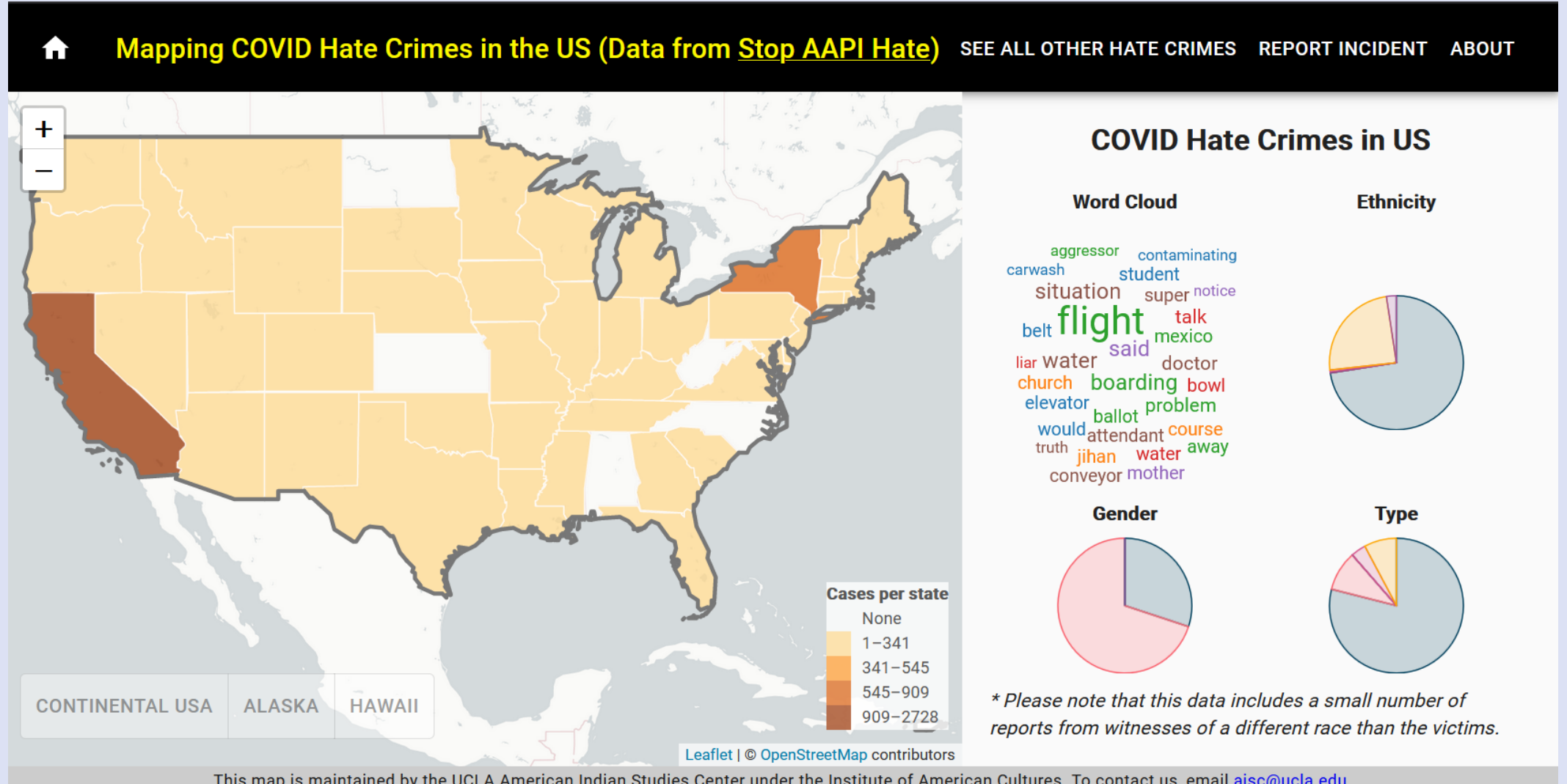
What is this course?



What is this course, really?



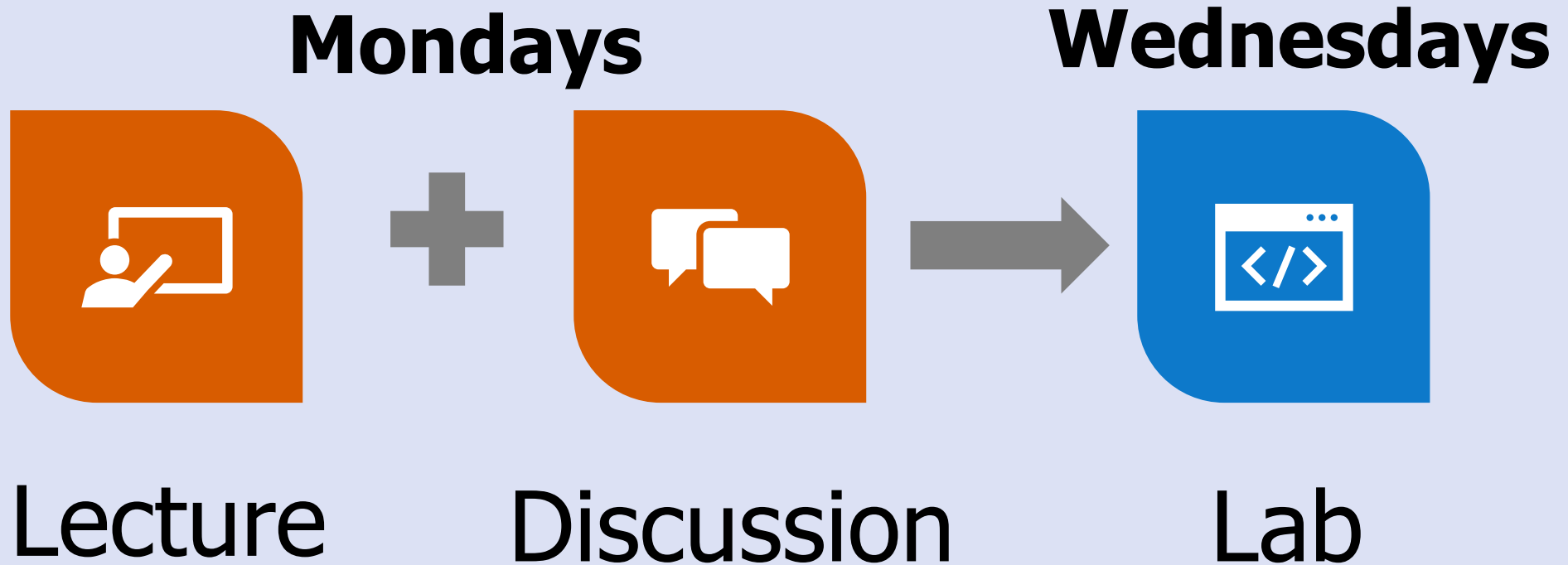
An example project



www.hatecrime.map.com/covid

Course Details

General Course Structure*



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



Assignments

Individual

Weekly



Readings



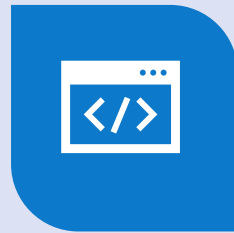
Labs



Posts

Group

Intermittent



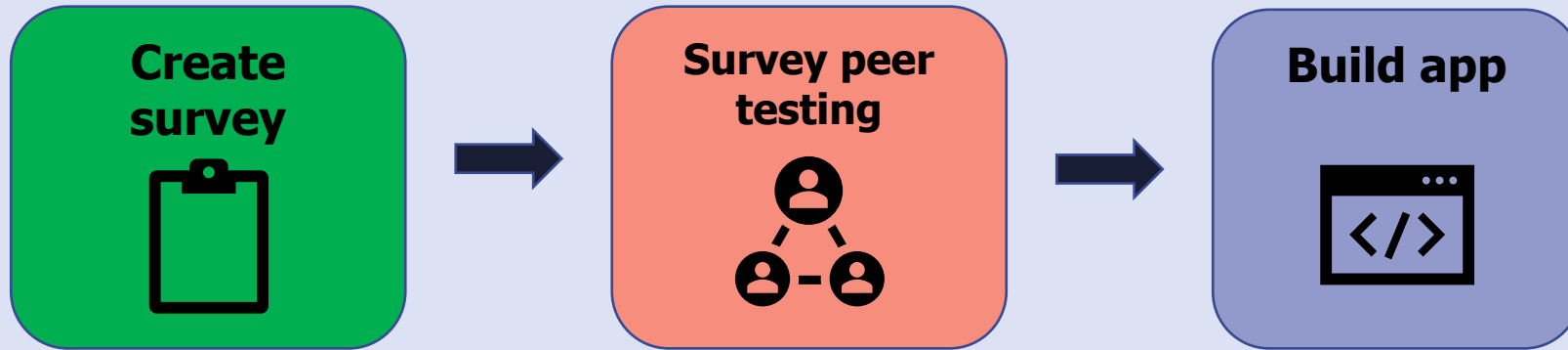
Project Milestones



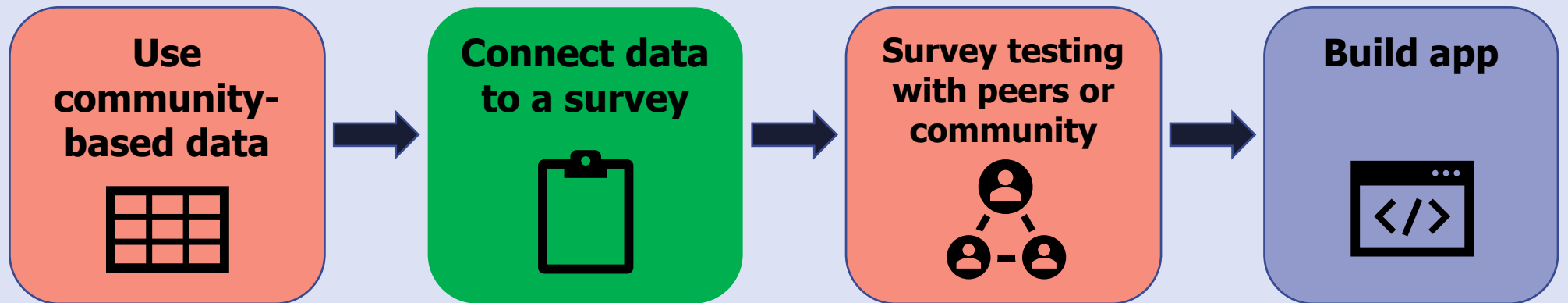
Final Project

Final Group Project

Option A:



Option B:



Student Projects from 2021

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

More Information: 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-Imagining 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

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

+

-

Services People Use in this Zipcode

calfresh food pantries food banks
none community fridges

Food Banks Food Pantries

CalFresh

None

AnyChart Trial

<

>

Reimagine 6th Street

[English Survey](#)[Encuesta en Español](#)[한국 설문 조사](#)[Github](#)[Contact Us](#)[About](#)[Select Language](#)Powered by [Google Translate](#)

+

-

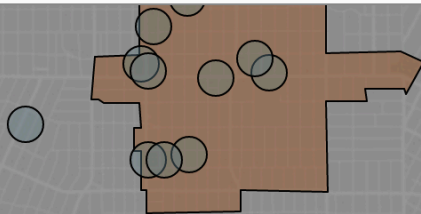
Reimagining 6th Street



"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.



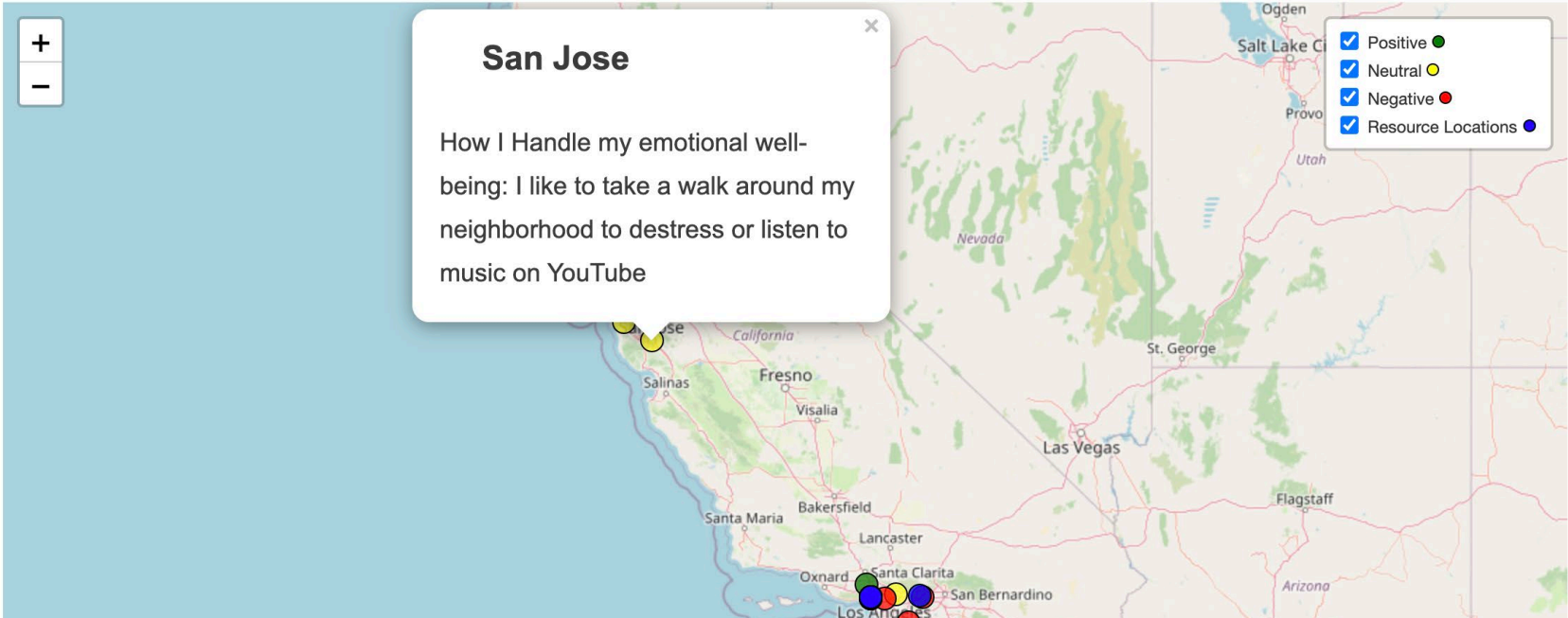
Yes 100%

90010

Total Responses: 5

Yes 100%

Where are Bruins, and how are they doing?



Community Snapshots

Statistics Report

none

How Are You Doing?

I've been feeling really anxious and depressed this school year, a lot of it due to the quarantine. I just feel really overwhelmed by classes and I feel isolated from my friends and classmates.

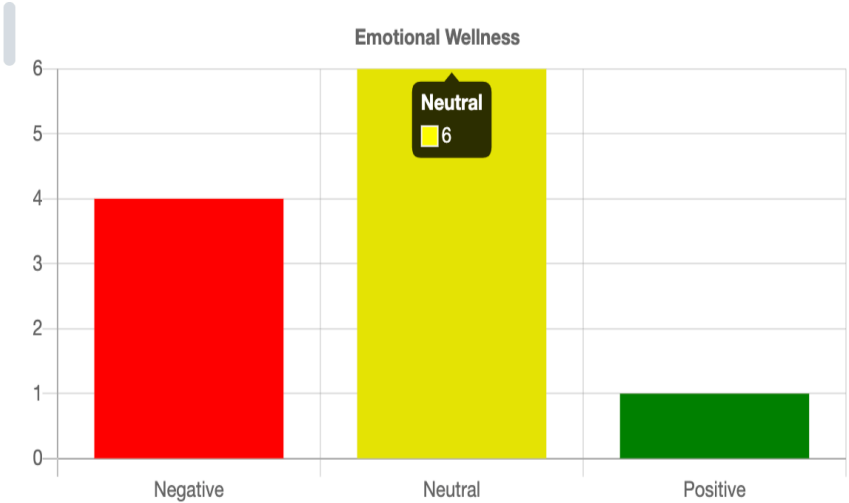
What's helped you?

Play video games, watch anime, talk to friends, cook/bake

What campus resources have you used?

SEA CLEAR peer counseling

Emotional Wellness UCLA Resources Count



How Did The Pandemic Affect Student Income at UCLA?

by Harry Frahn & Sara Perez

[Read Project Background](#)

[Take The Survey!](#)

[Student Resources](#)

Student Responses, Mapped

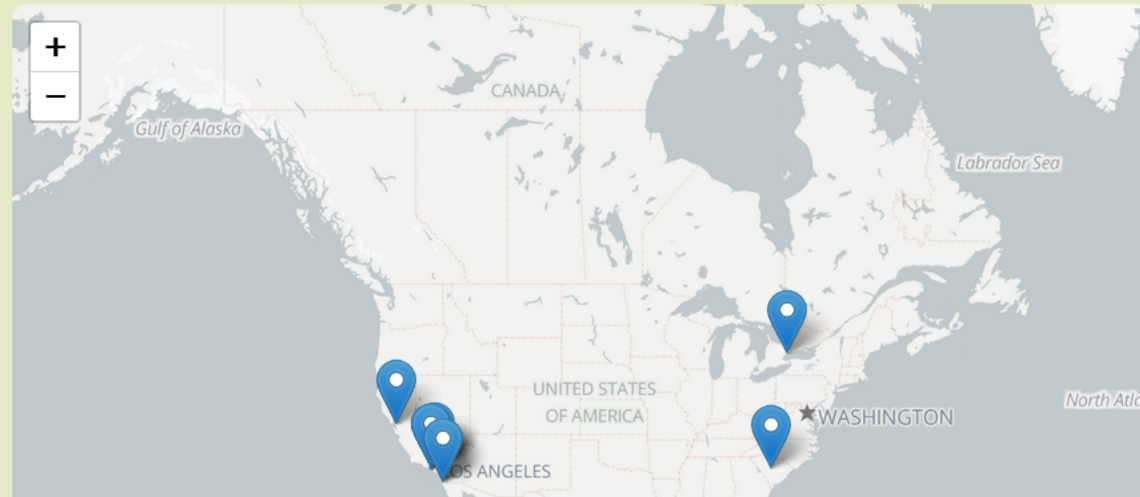
Click To See Student Responses

- Toronto Canada
- Pasadena, CA
- Oakland, CA
- Los Angeles

Summary Charts:

Do You Recieve Financial Aid from UCLA?

Yes No



Student Open Responses

Do you consider yourself to be low-income?

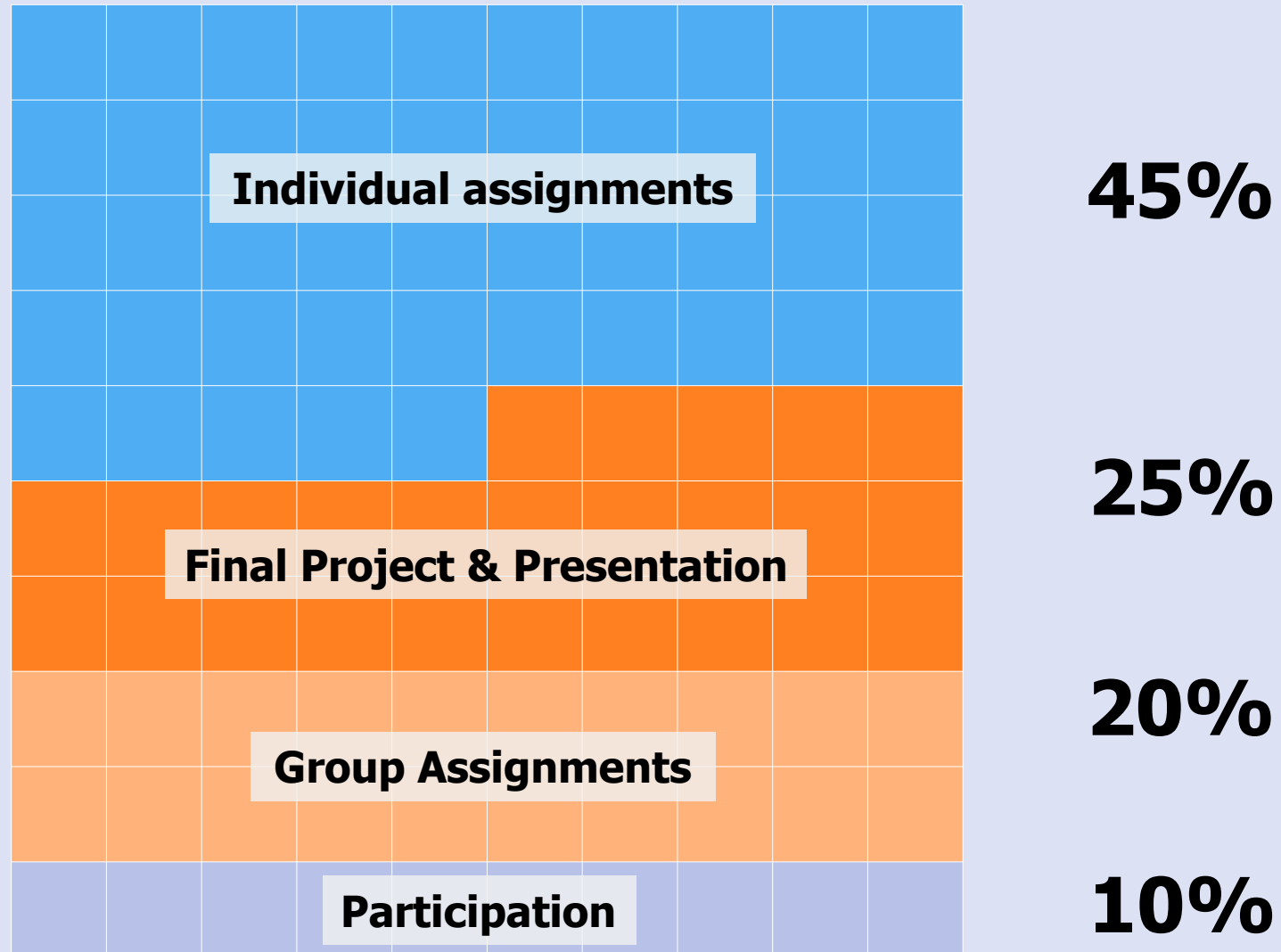
Yes, i do consider myself to be low income. With 2 other siblings in college, my parents cannot afford to pay full tuition for all of us. With financial aid and work study, I'm still able to afford to pay for college but it still is much more than what my family can afford.

How did the COVID-19 pandemic affect you financially while in school?

Financially, it hasn't affected my much. I was

<https://hrfrahn.github.io/191A-GroupProject/>

Evaluation

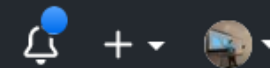


The class website and syllabus



Search or jump to...

[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)



[albertkun](#) / [22S-ASIAAM-191A](#) Public

Unwatch 1

Fork 0

Star 1

[Code](#) [Issues](#) [Pull requests](#) [Discussions](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [...](#)

main

4 branches 0 tags

[Go to file](#)

[Add file](#)

[Code](#)

About



albertkun.github.io/22s-asiaam-191a/

Readme

GPL-3.0 License

albertkun feat: really fixed week1 list ✓ eaf8752 6 days ago 20 commits


.github/workflows feat: syllabus moved to index last month

It's all on GitHub!

<https://albertkun.github.io/22S-ASIAAM-191A/syllabus>

Course Outline

| Week | Lectures | Labs |
|------|--|----------------------------------|
| 3/28 | GIS, Data, Ethics | GitHub, HTML, CSS, JavaScript |
| 4/4 | Critical Cartography and Civil Society | HTML, CSS, JavaScript |
| 4/11 | Open Source and Web Mapping | HTML, CSS, JavaScript |
| 4/18 | Web Developing for Civil Society | HTML, CSS, JavaScript |
| 4/25 | Society, Technology, and Ethics | HTML, CSS, JavaScript |
| 5/2 | Human-Centered Design | GitHub and HTML, CSS, JavaScript |
| 5/9 | Communication Design for Social Change | HTML, CSS, JavaScript |
| 5/16 | Mentorship and Collaboration | HTML, CSS, JavaScript |
| 5/23 | Connecting Activism and Technology | HTML, CSS, JavaScript |
| 5/31 | Beyond Web Development and Social Change | HTML, CSS, JavaScript |

 = Guest Lecturer

Course Software Requirements*



git



GitHub

– completing assignments



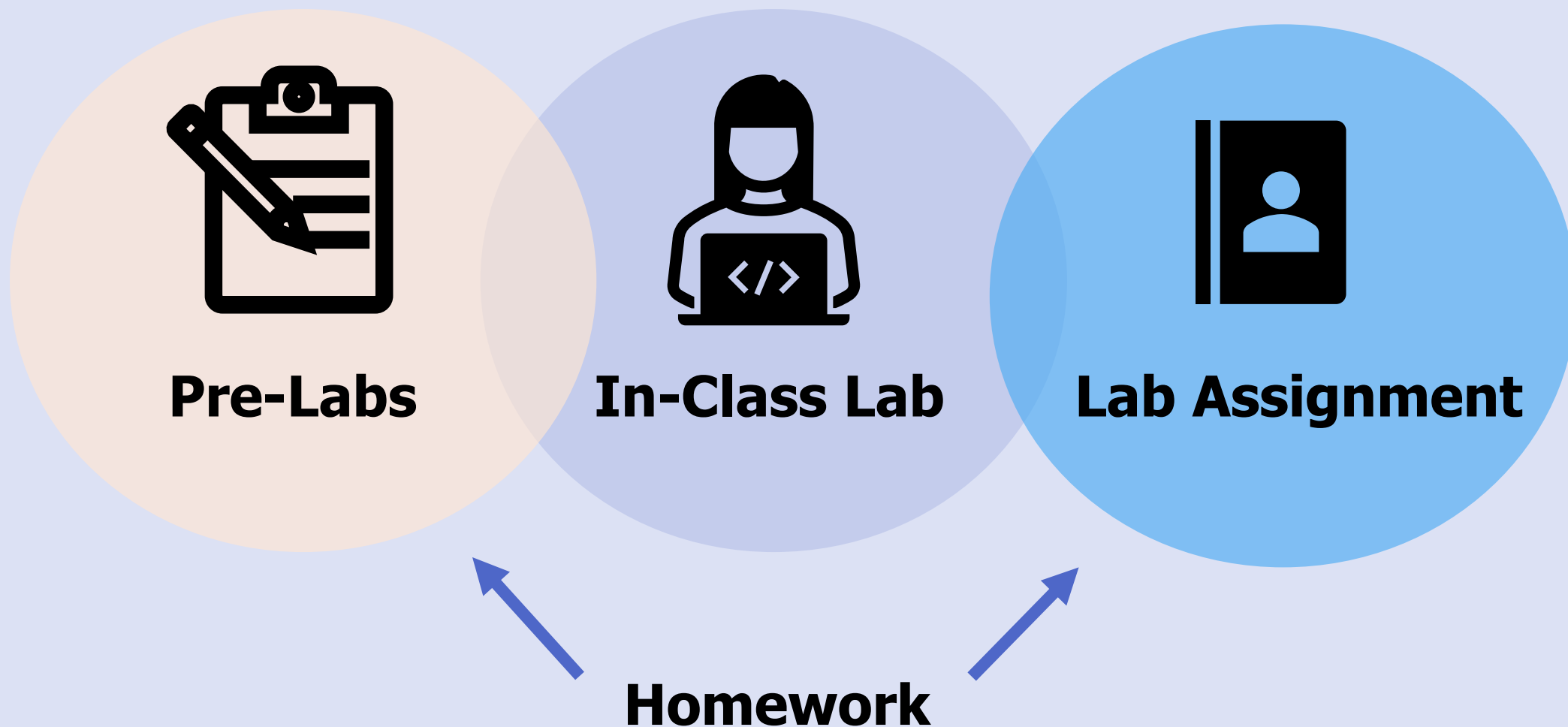
VS Code – writing code



Firefox – web 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](https://stackoverflow.com)

- **Ask the class!**

- **Discord**

<https://discord.gg/BpWSHYNsZA>

- **GitHub Discussions**

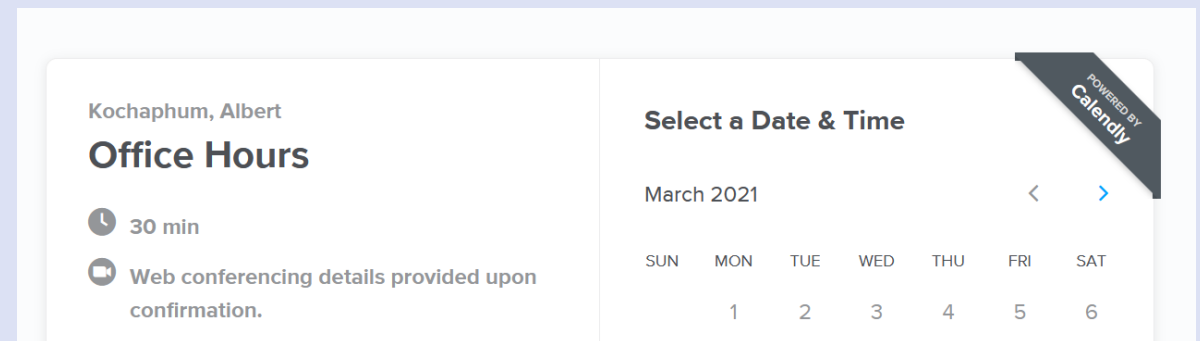
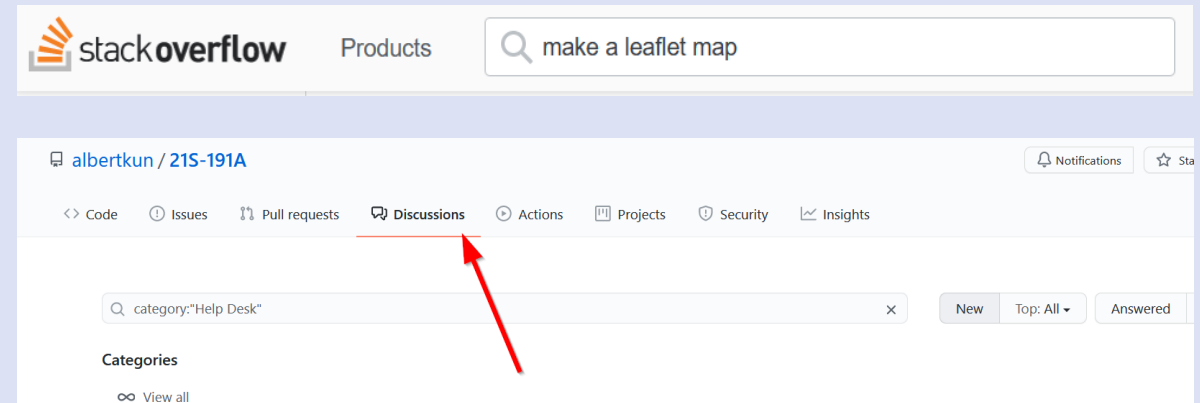
<https://github.com/albertkun/22S-ASIAAM-191A/discussions/>

- **Drop by office hours**

<https://calendly.com/aa191a/office-hours>

- **Email the instructor**

albertkun@oarc.ucla.edu



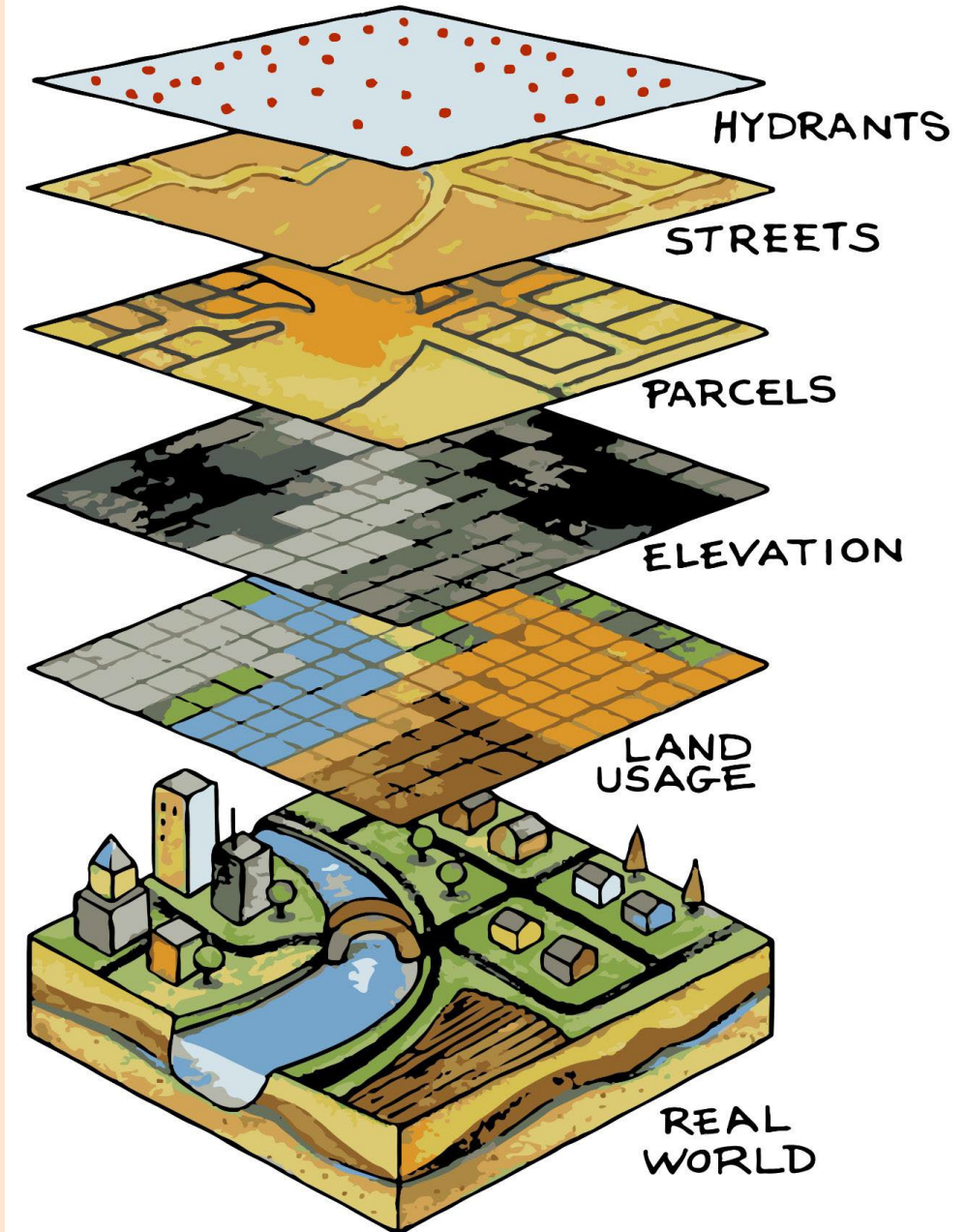
Core Principles in summary:



GIS, Data, and Ethics

Albert Kochaphum
Lecture 1 | March 28th, 2022

GIS



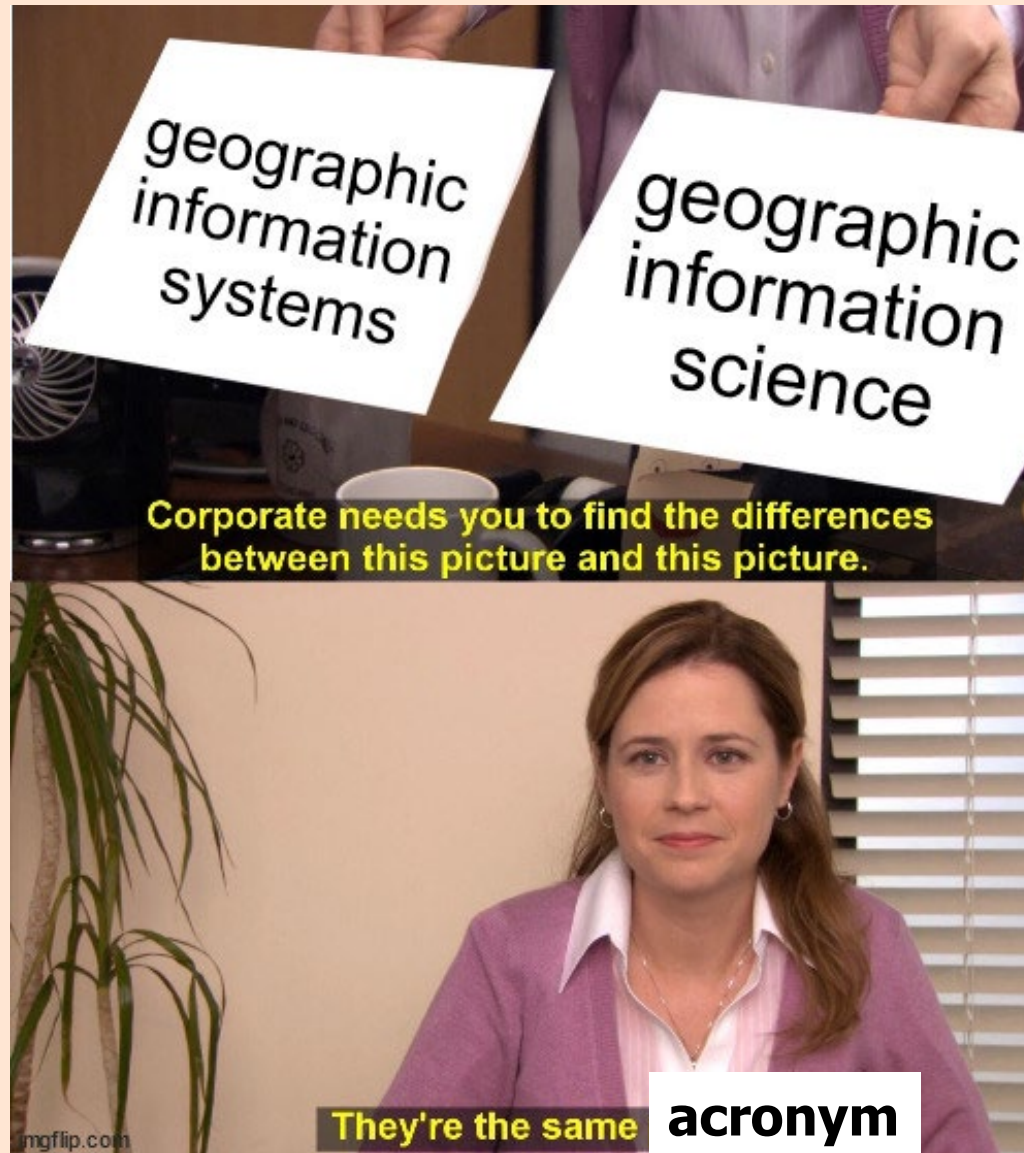
What is GIS?

A) Geographic Information Systems

or

B) Geographic Information Science

What is GIS?



What is GIS?

GISystems

=



Spatial tools

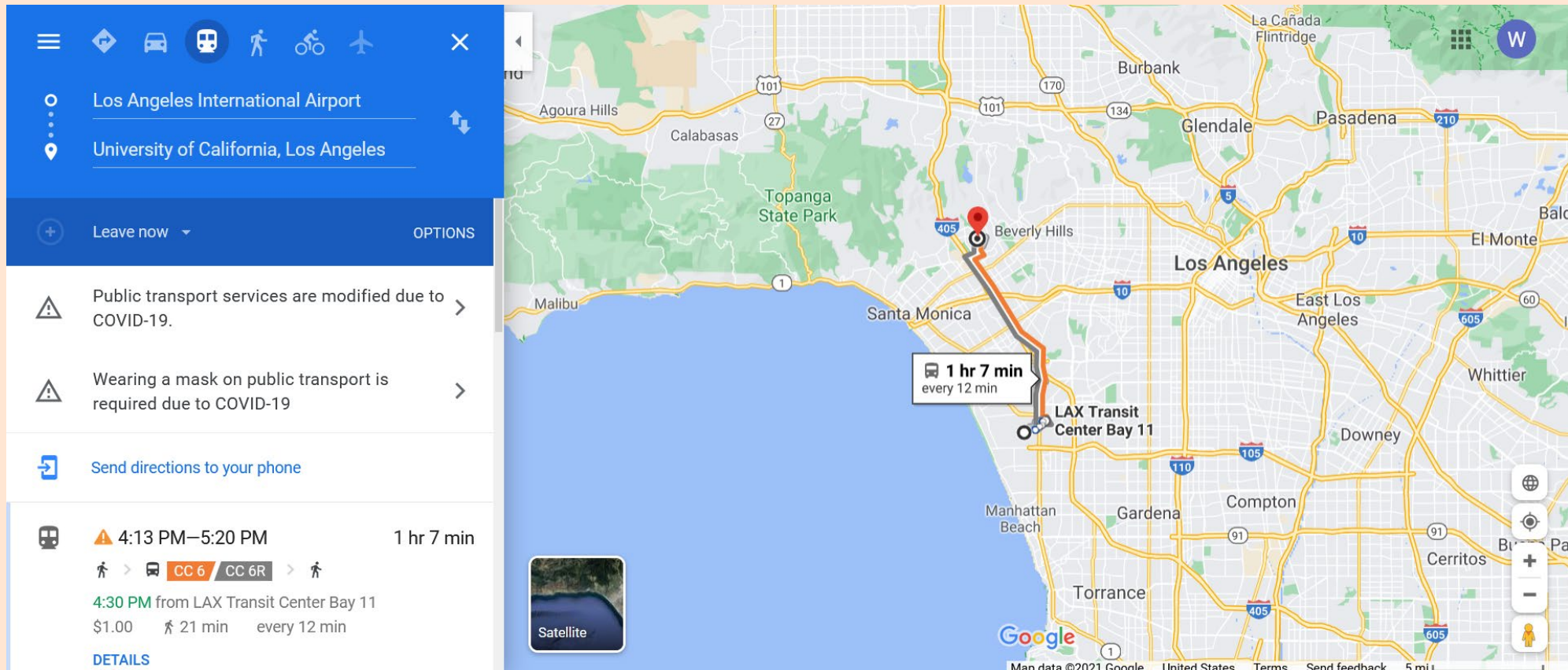
GIScience

=



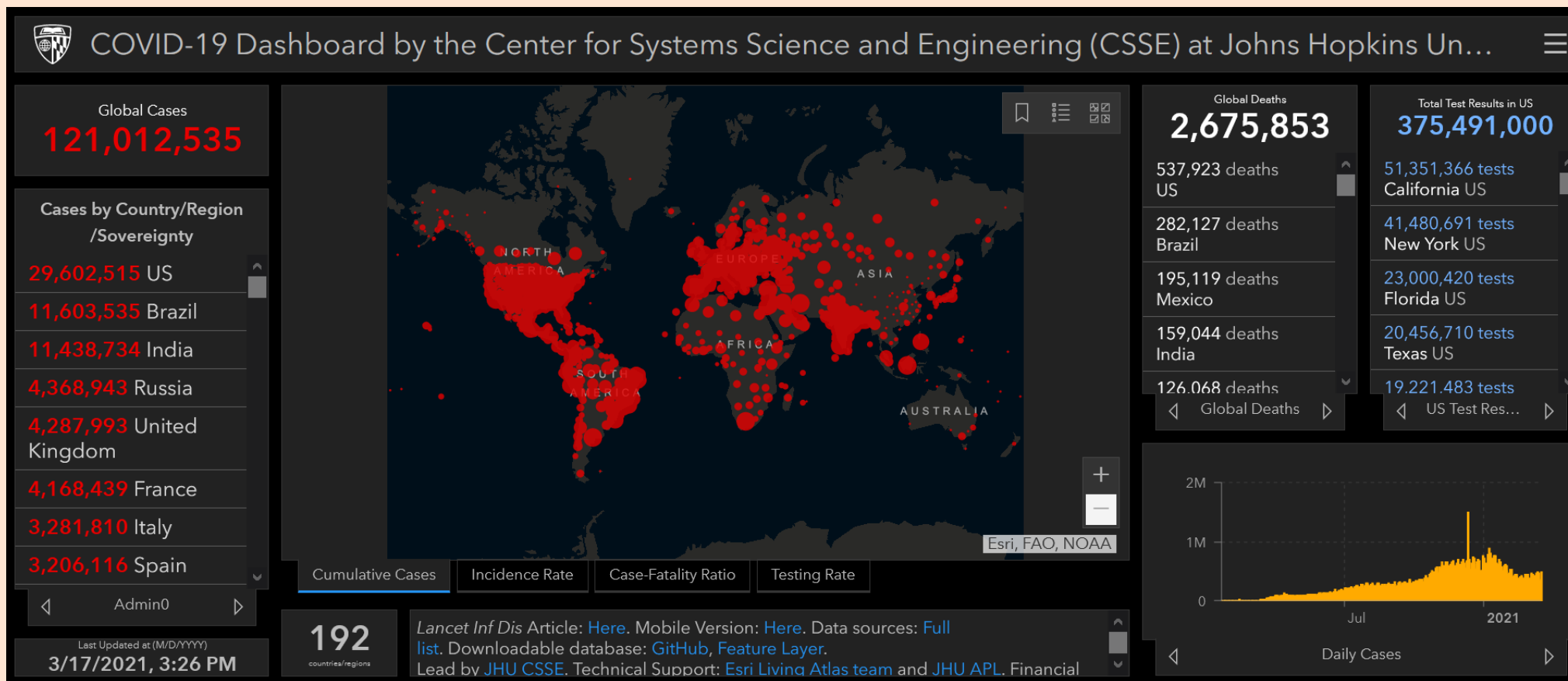
Spatial thinking

Examples of GIS



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

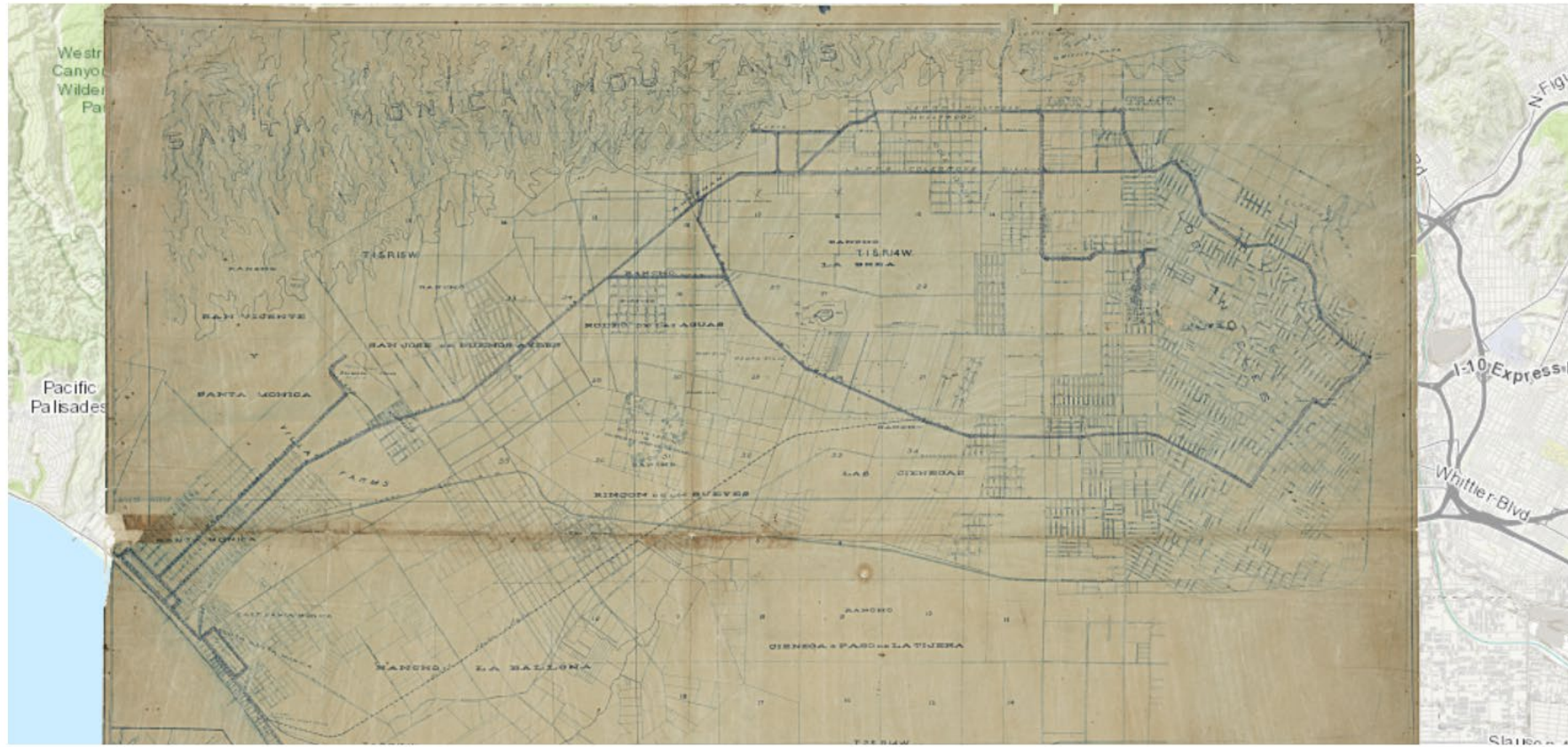
Examples of GIS



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

Are historical maps GIS?

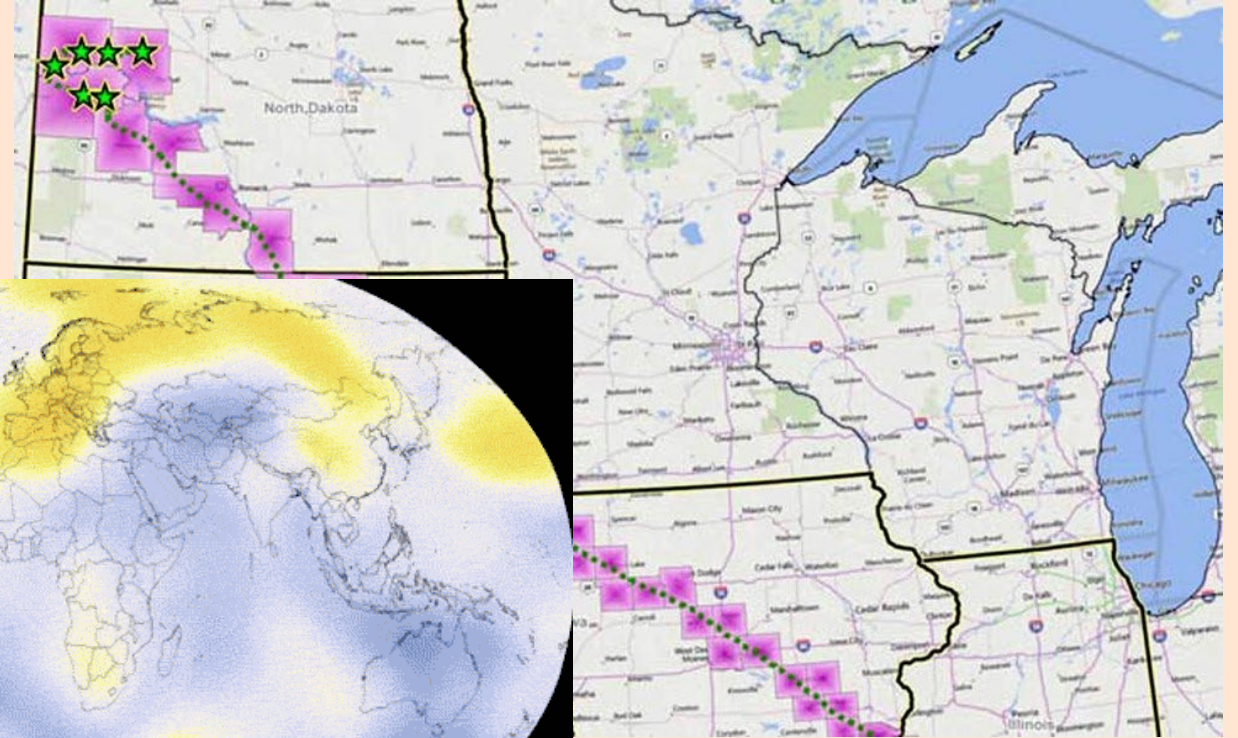
Map of the Los Angeles-Pacific R.R.



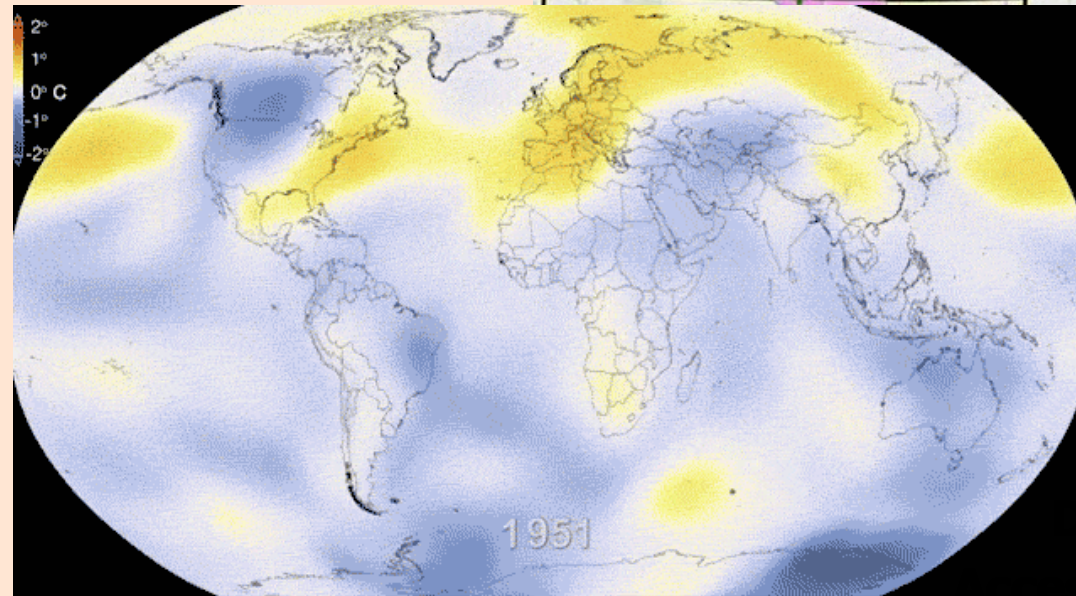
HyperCities Map Library, <http://www.hypercities.com/maplibrary/index.html>

GIS exists in various forms

It can disempower



It can empower



**North Dakota
Access Pipeline**

**Global Temperature
Increase**

Participatory GIS/Community-Based GIS

| | 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 | | | |
| TRANSFORMATI VE | Facilitate sustainable development by local people | Facilitator /catalyst | Analyst /Actor /Agent | | | |
| SELF-MOBILIZING | Support spontaneous action | Supporter | Owner /controller | Support | Initiate | Local people's |

**Our
Focus**



Participatory Mapping and Geographic Information Systems, 2006

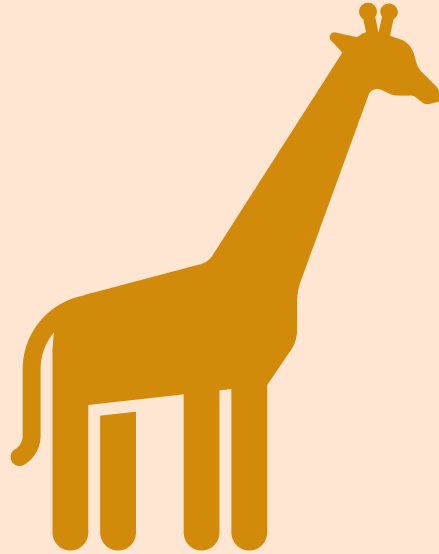
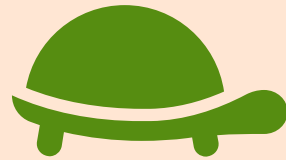
Participatory GIS/Community-Based GIS



Data



Data



Qualitative

- Color
- Animal species

Quantitative

- Height
- # of legs

Applying our knowledge!

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 Tuesday (3/30). 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/21S-191A/>

Email address *

Valid email address

This form is collecting email addresses. [Change settings](#)

Name *

Short answer text

Critical Data Studies



Problems with a data-only approach:

**Assumes Social problems
are**

Knowable

Controllable

Rational

Neutral

Technocratic

Objective

Non-ideological





Voices of community


Power relations

Power Inequalities

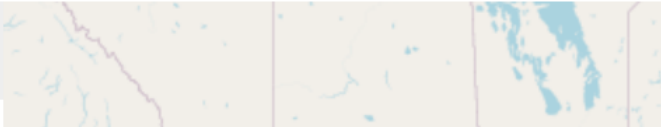
Alternative data forms:

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

[WHAT WE DO](#) [OUR WORK](#) [TOOLS & DATA](#) [NEWS](#) [COMMUNITY & ORGANIZATION](#) [PARTNER WITH US](#) [GET INVOLVED](#) [Q](#)

 **OpenStreetMap** [Edit](#) [History](#) [Export](#)

[Where is this?](#) [Go](#) [↗](#)



Mapping Hate Crimes in the US #OneHateCrimelsTooMany [SEE COVID HATE CRIMES](#) [REPORT INCIDENT](#)

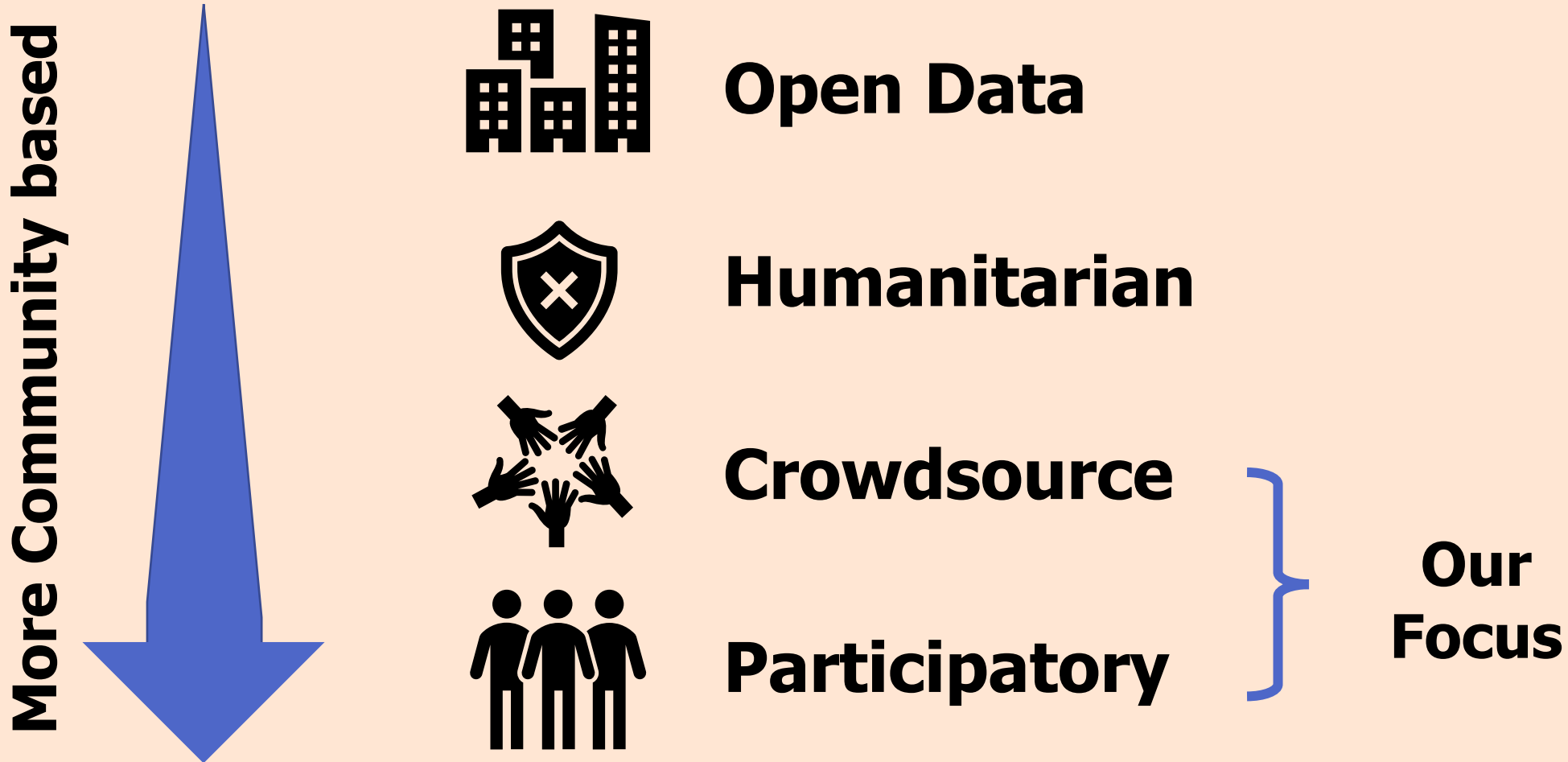
If this is a COVID-related incident, consider navigating to the COVID page through the menu and reporting there.

- 1 Harassment Location**

[BACK](#) [NEXT](#)
- 2 Date of Harassment**

[←](#) [→](#)

Alternative data forms:



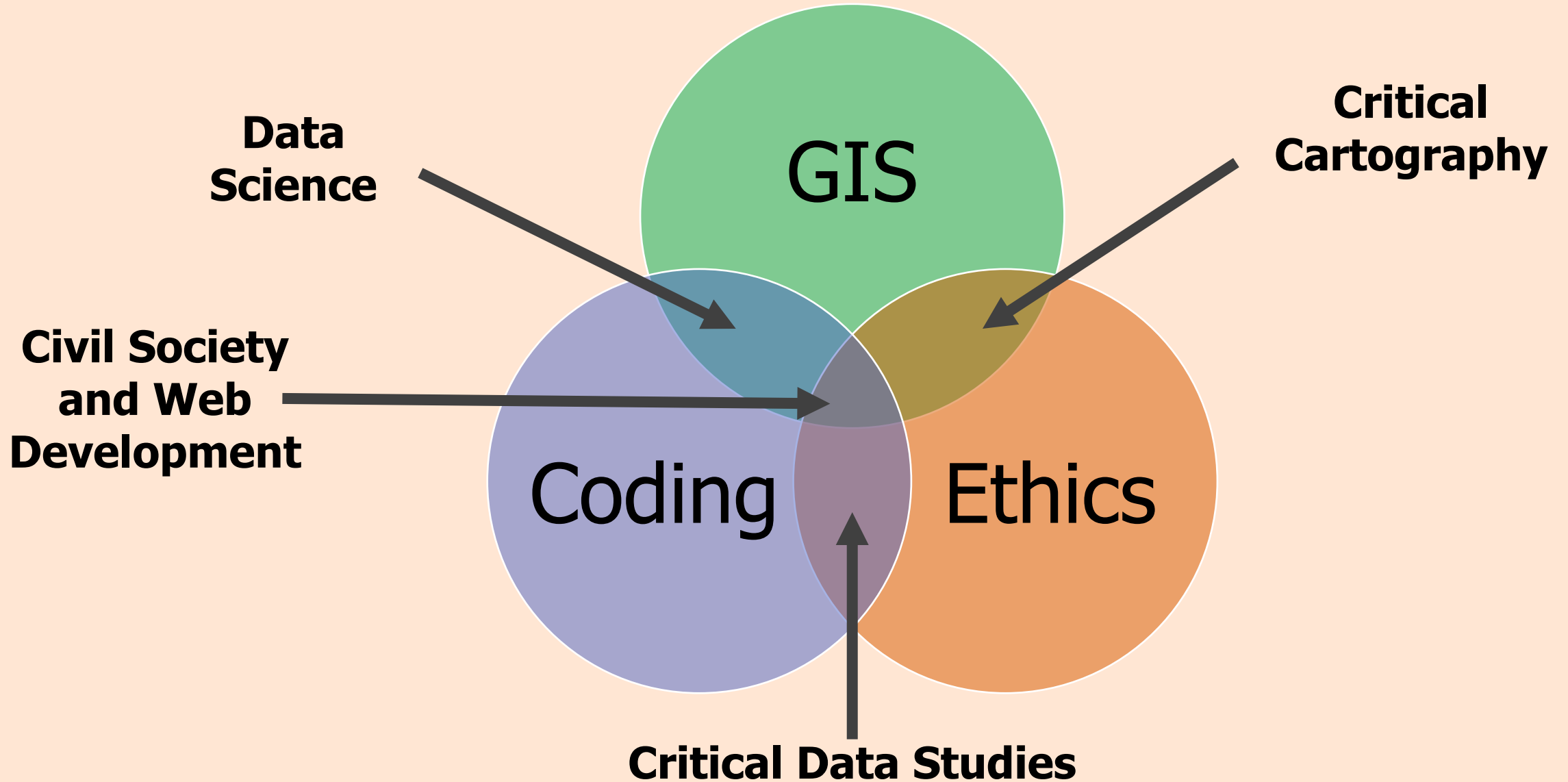
Ethics

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 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/22S-ASIAAM-191A/discussions/1>

First Assignments

Complete the following:

Due Wednesday 3/30:

1. [Pre-Lab](#)

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