



Web Development and GIS for Social Change

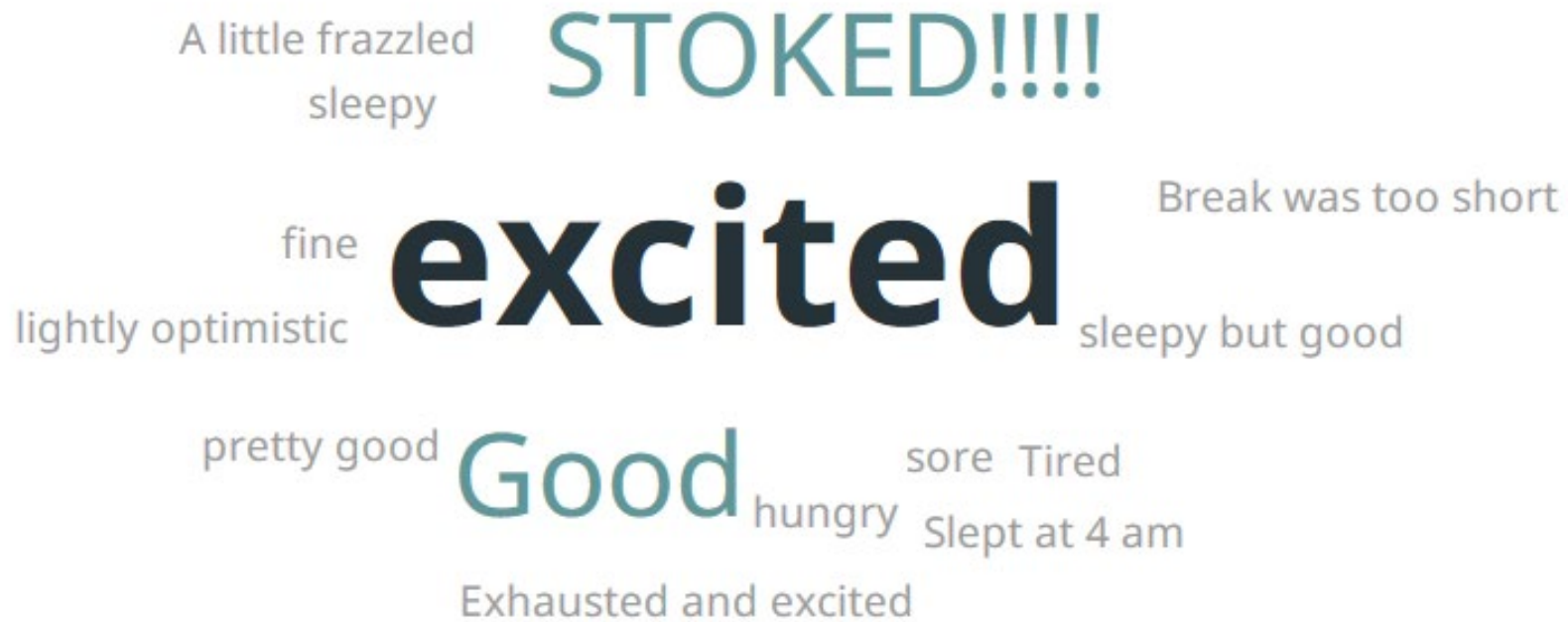
Critical Data for Transforming Civil Society

Join at
slido.com
#ucla

Albert S. Kochaphum
Week 1 | March 30th, 2021

How are you feeling?

0 1 9



A word cloud of various feelings and states. The words are arranged in a roughly circular pattern around the center. The most prominent words are 'excited' (largest, black) and 'STOKED!!!!' (large, teal). Other words include 'Good' (teal), 'A little frazzled', 'sleepy', 'fine', 'Break was too short', 'lightly optimistic', 'sleepy but good', 'pretty good', 'sore', 'Tired', 'hungry', 'Slept at 4 am', and 'Exhausted and excited'.

A little frazzled
sleepy
STOKED!!!!
fine
excited
Break was too short
lightly optimistic
sleepy but good
pretty good
sore Tired
hungry Slept at 4 am
Exhausted and excited

Today's Agenda

Introductions

Course details

Lecture

Discussion

Wrap-up



Introductions



About me!

GIS + code = ftw

bikeclist

made in san francisco

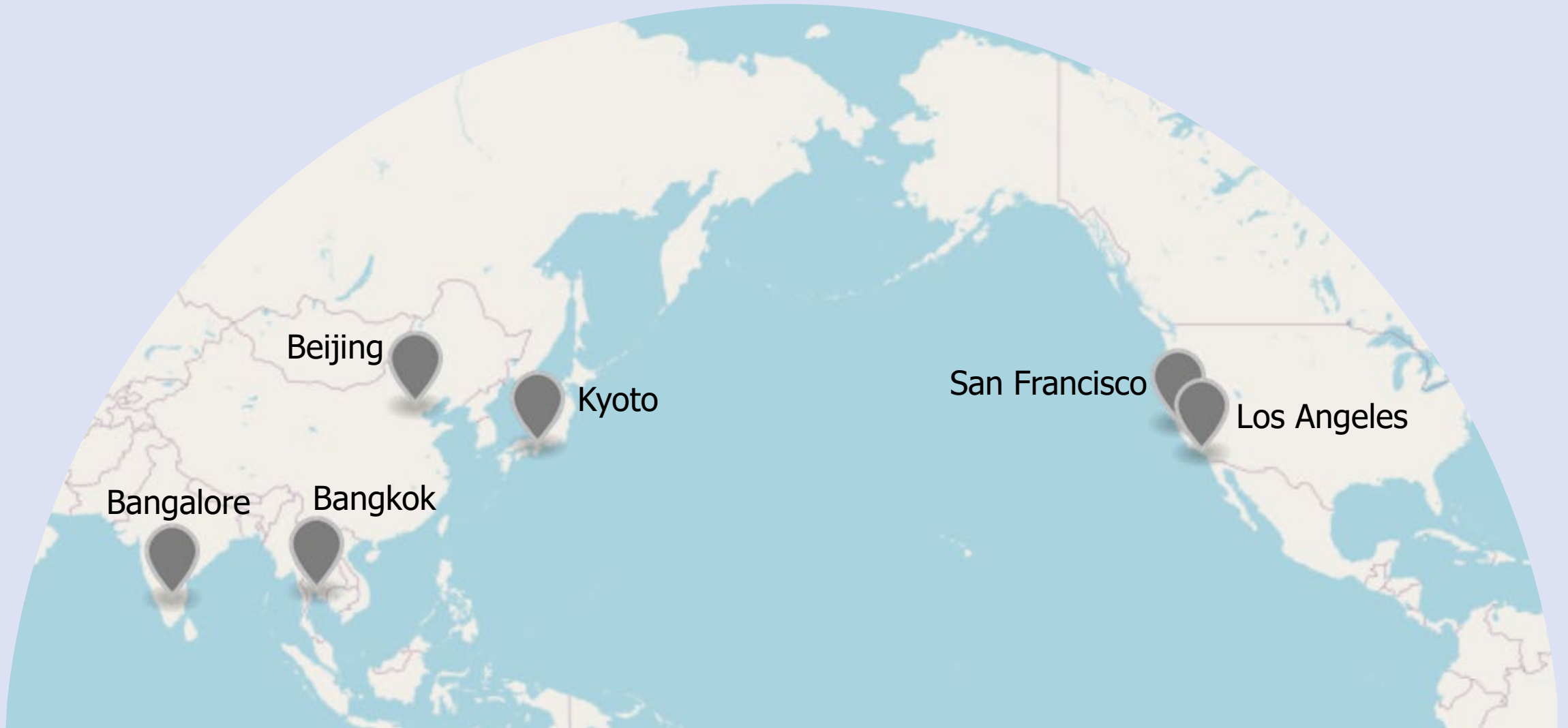
omg, climate change :(

wow! Much tarrible puns

can we haz
more social equity?



More about me



Beijing

Kyoto

San Francisco

Los Angeles

Bangalore

Bangkok









Jane Map

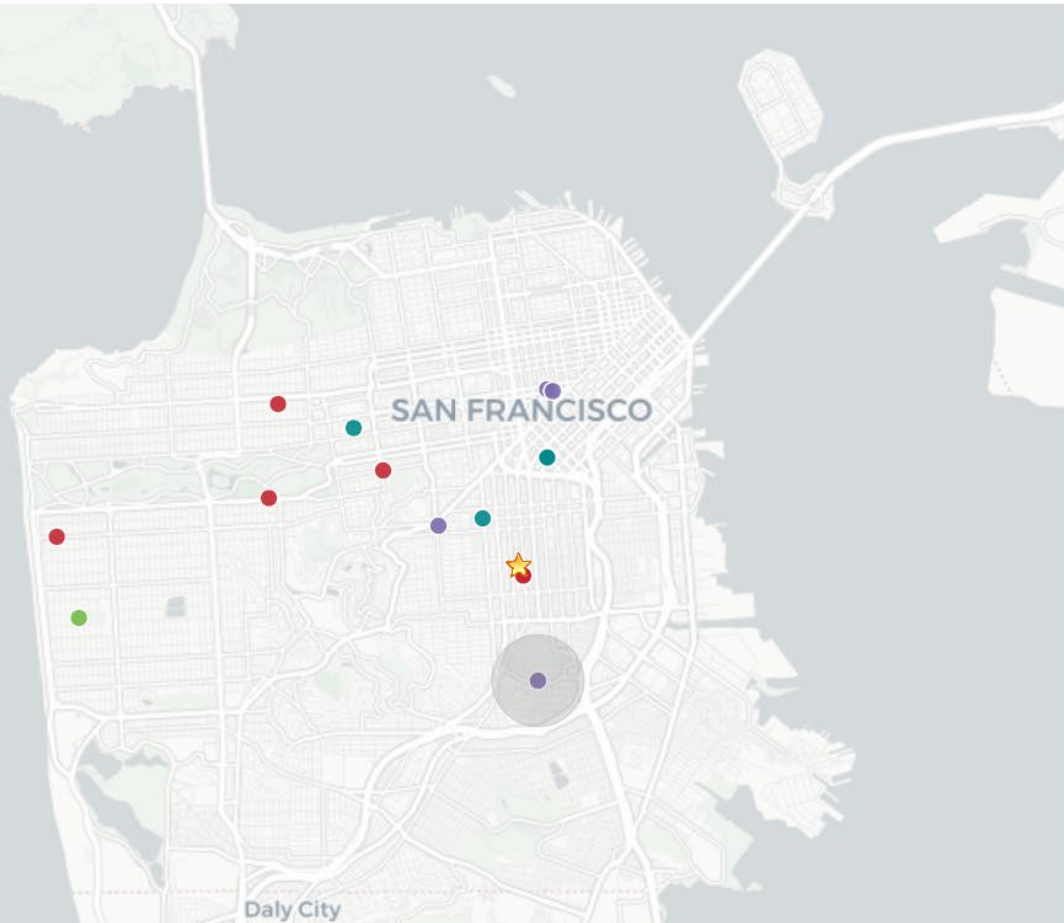
Let's get started on electing a progressive mayor for San Francisco.

Share

Tweet

Reddit

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

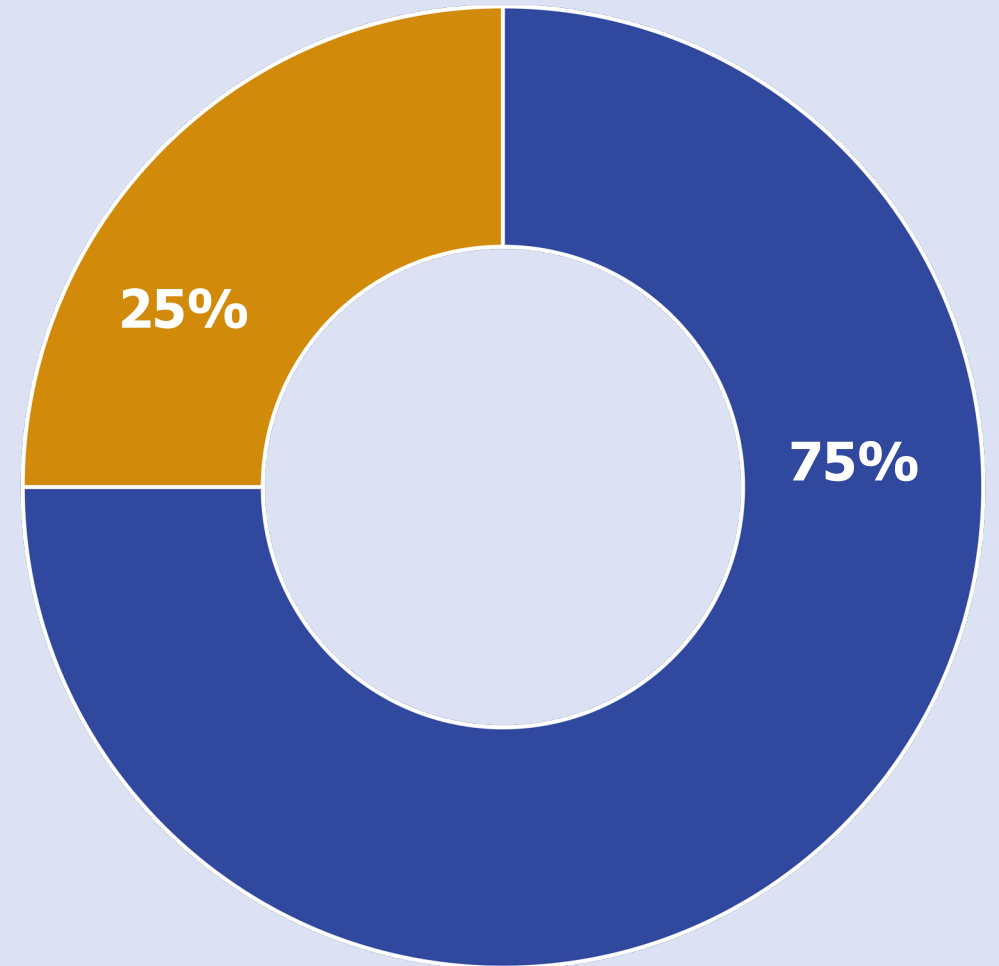
RSVP


Get Directions

What type of web application we will be making!

About you!

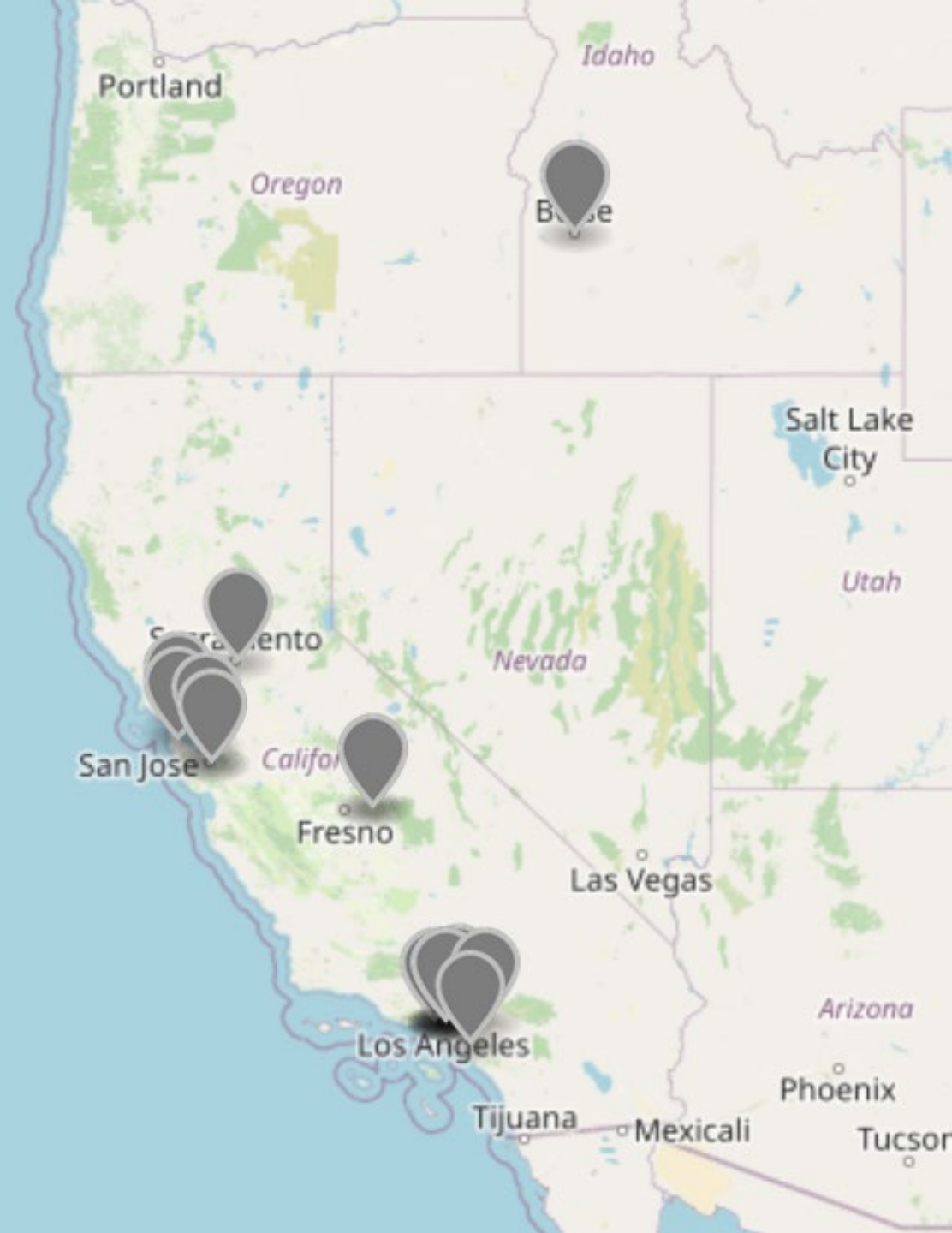
Enrolled Student Status



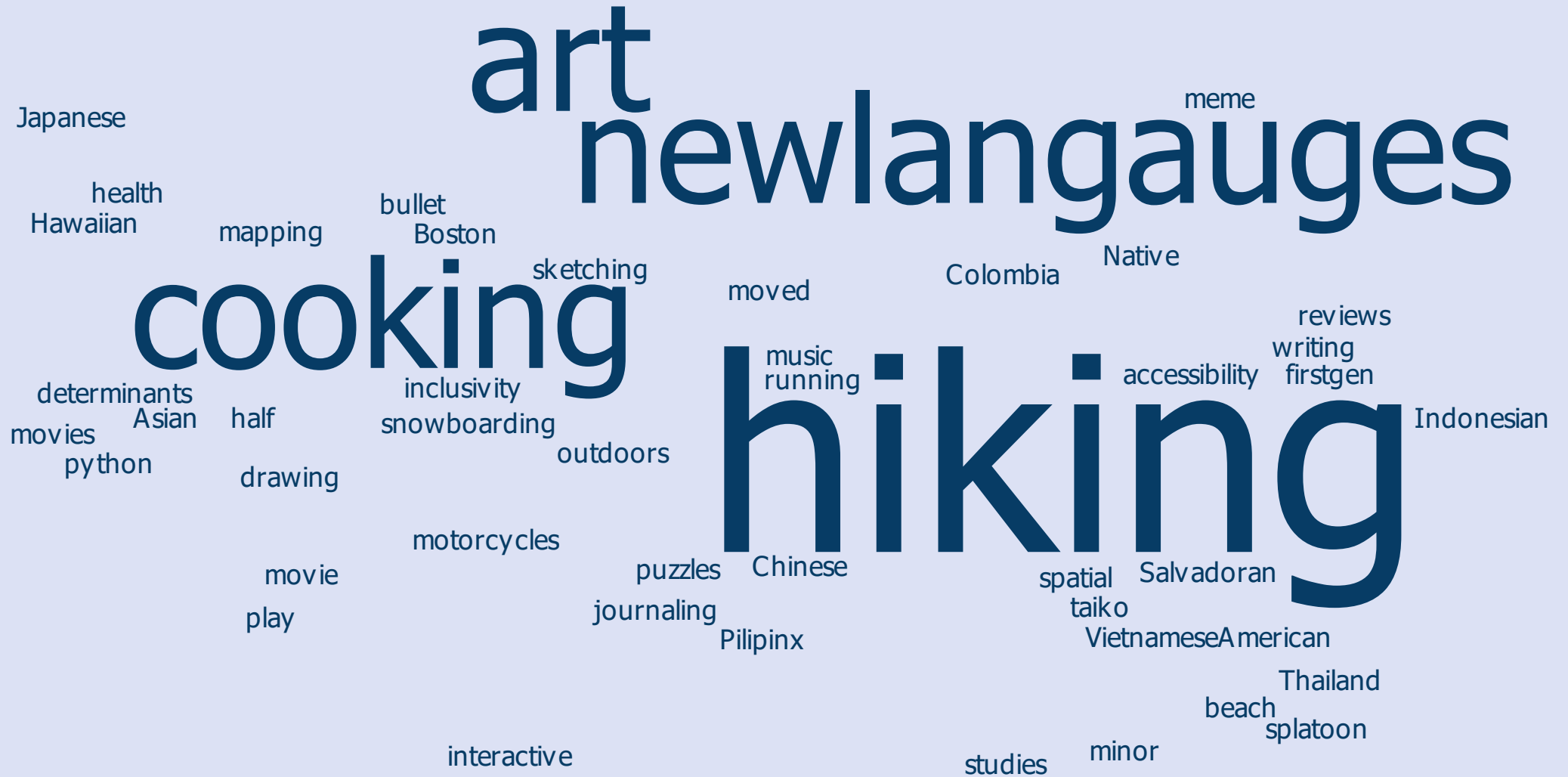
 **Graduate Students**

 **Undergraduate Students**

About you!



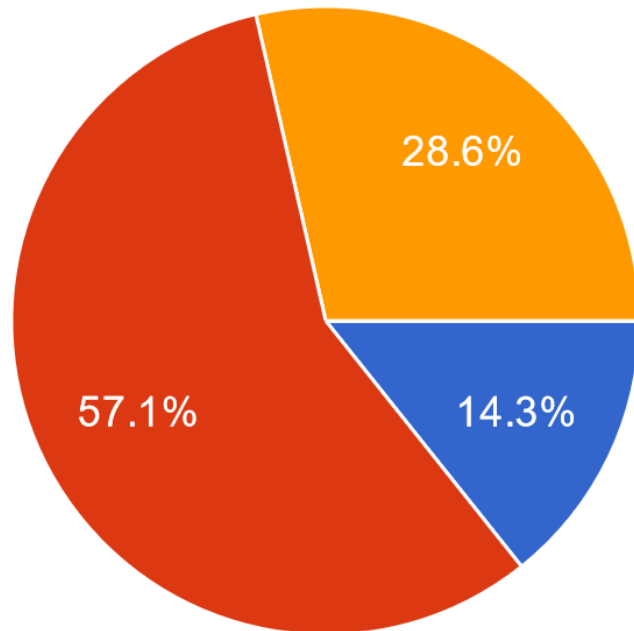
About you!



About you! Web Development

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

21 responses

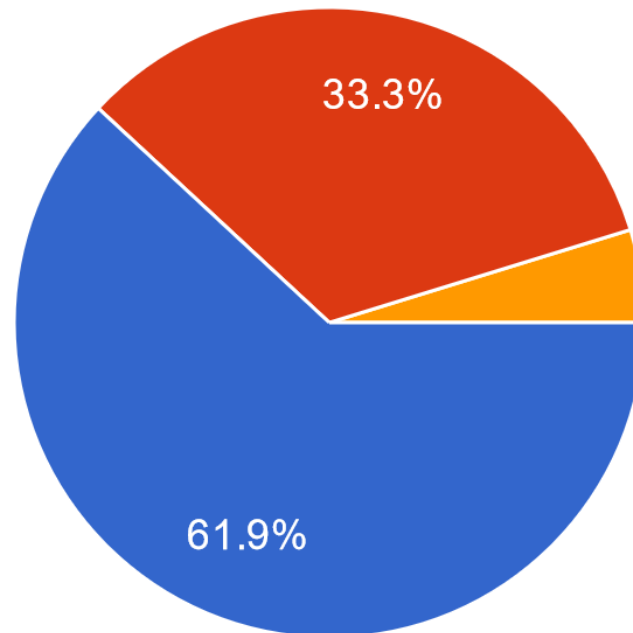


- I have no experience, so I cannot say.
- Some, I have written code before, but it's kind of intimidating.
- Pretty comfortable, I enjoy it.
- 0110100100100000011010110110111...

About you! GIS

What is your familiarity with GIS?

21 responses

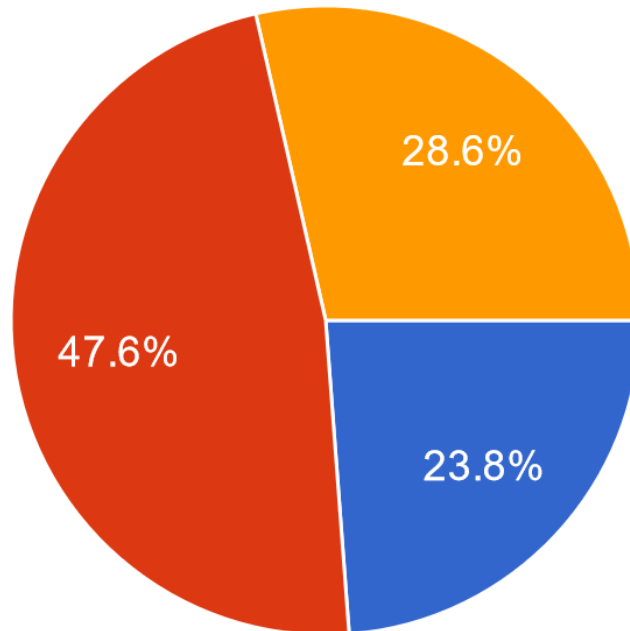


- None, the course title was the first time I heard about GIS
- Some, I got the GIST of it and I can make some maps
- Lots, you can say I am a spatial GenluS!

About you! Civil Society

What is your experience with civil society?

21 responses

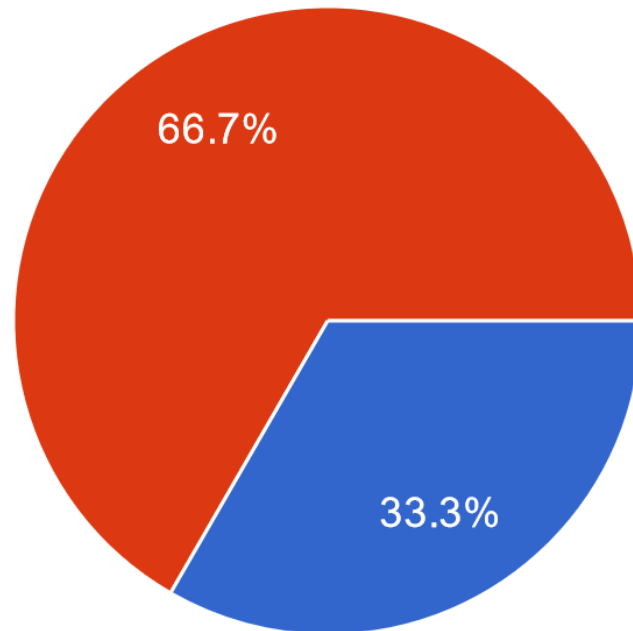


- None, isn't society already civil?
- Some, I have done things like volunteering at a non-profit before
- Lots, you can say I put the PRO in protests.

About you! Data

What is your familiarity with cleaning data?

21 responses



- None, is that 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.

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:

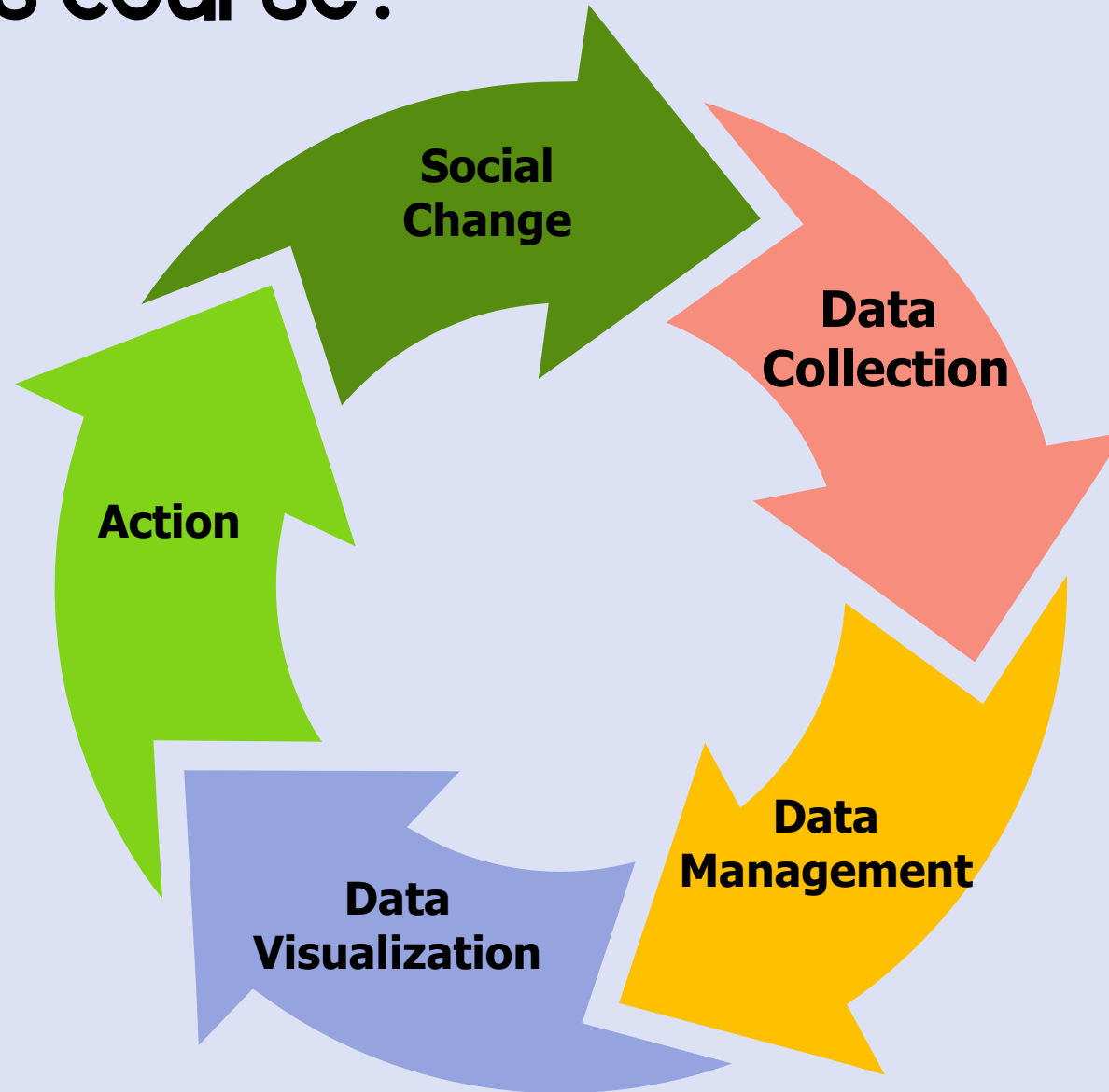
I HAVE NO IDEA WHAT I AM DOING





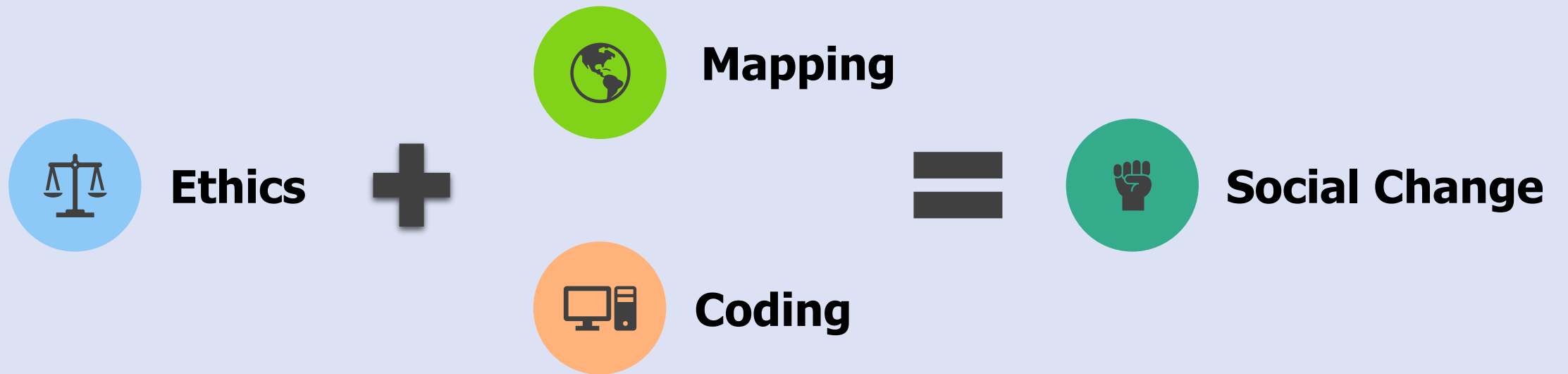
THIS ISN'T SO RUFF

What is this course?



It's a process

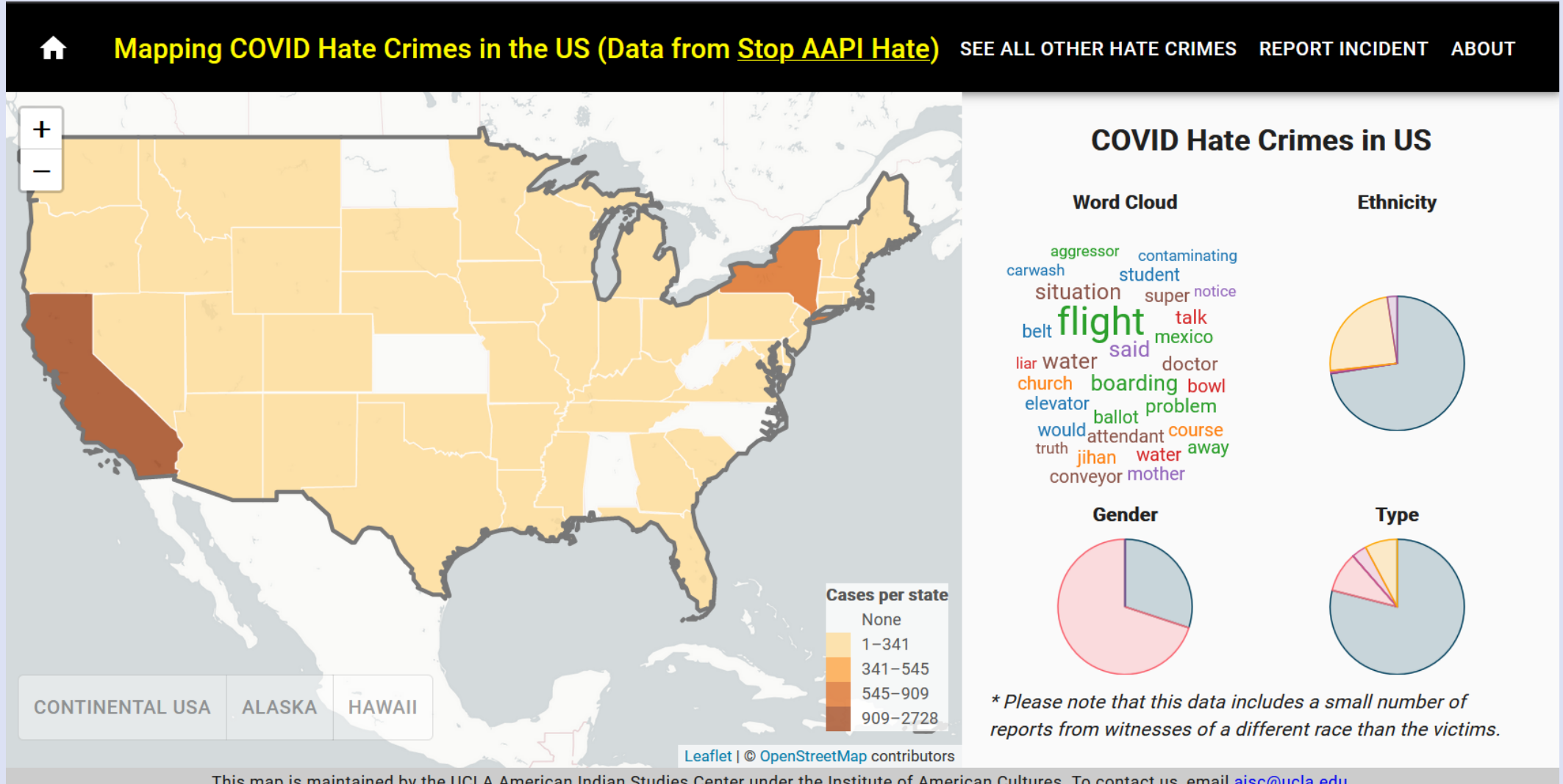
What is this course?



What is this course, really?



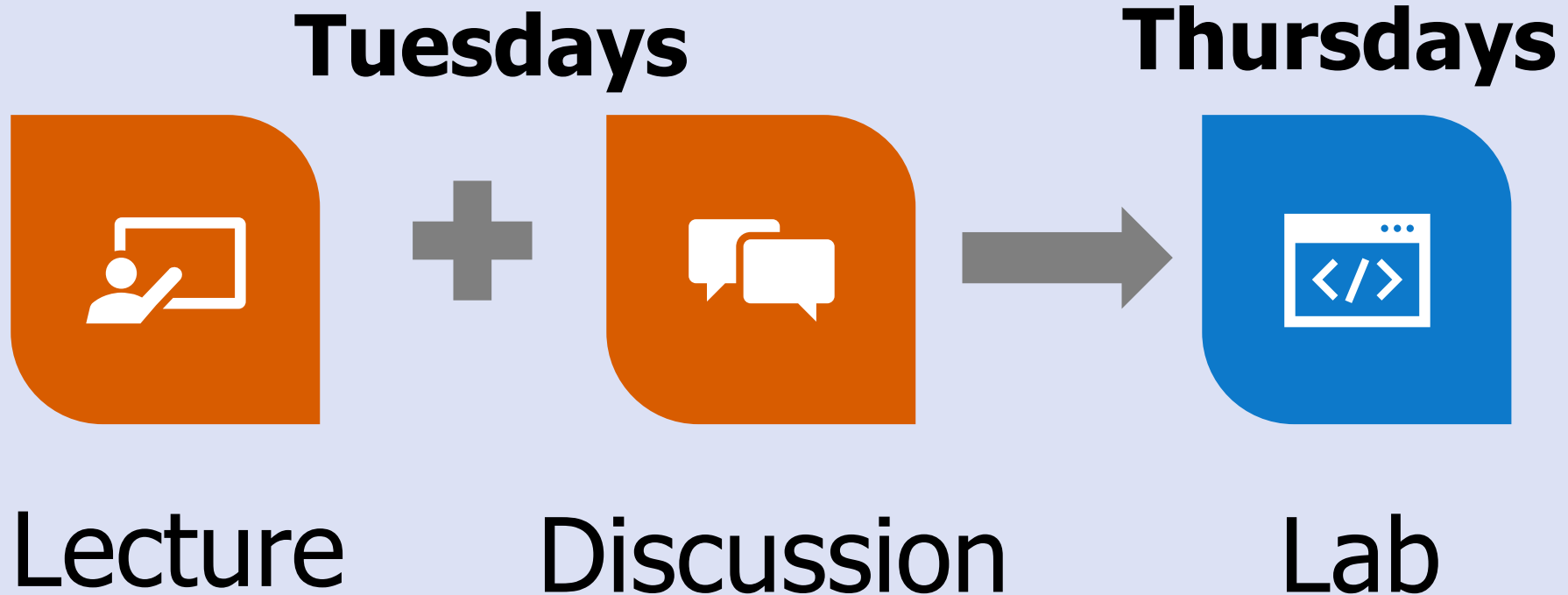
An example project



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



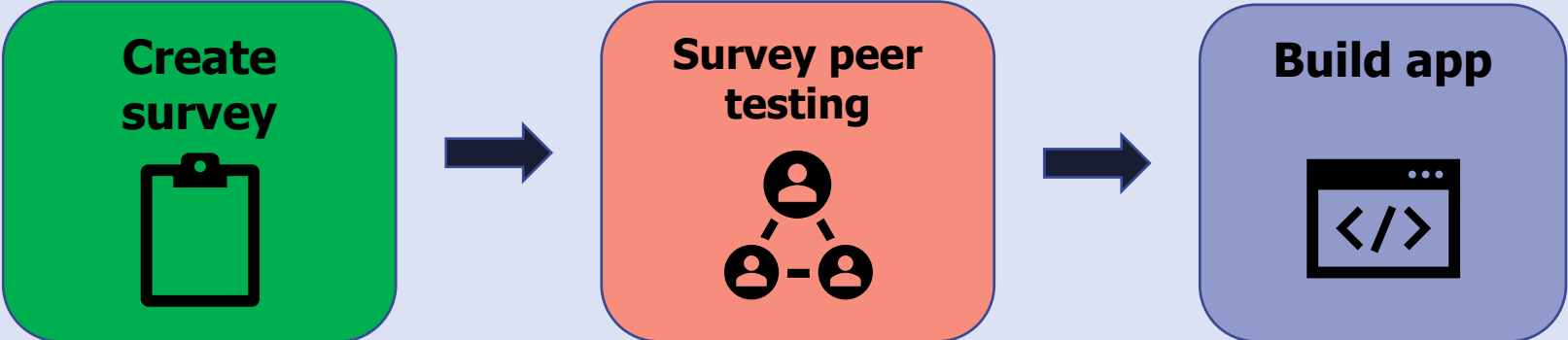
Project Milestones



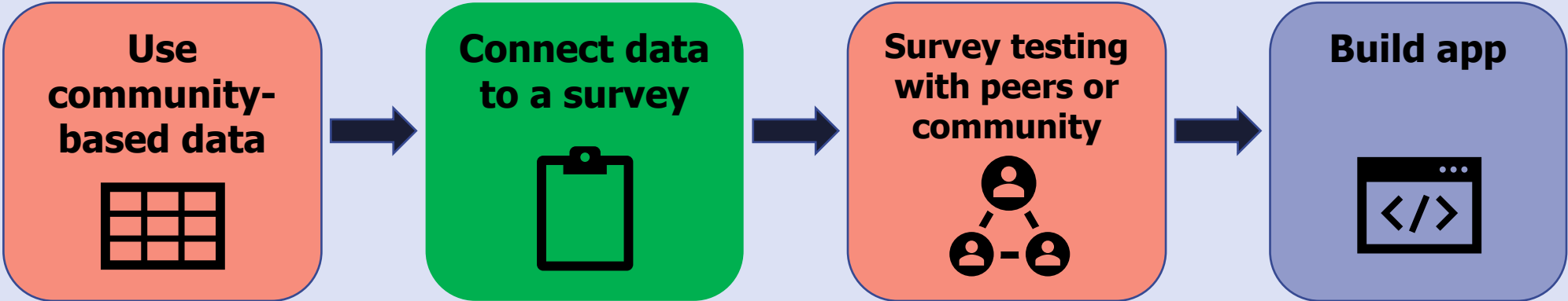
Final Project

Final Group Project

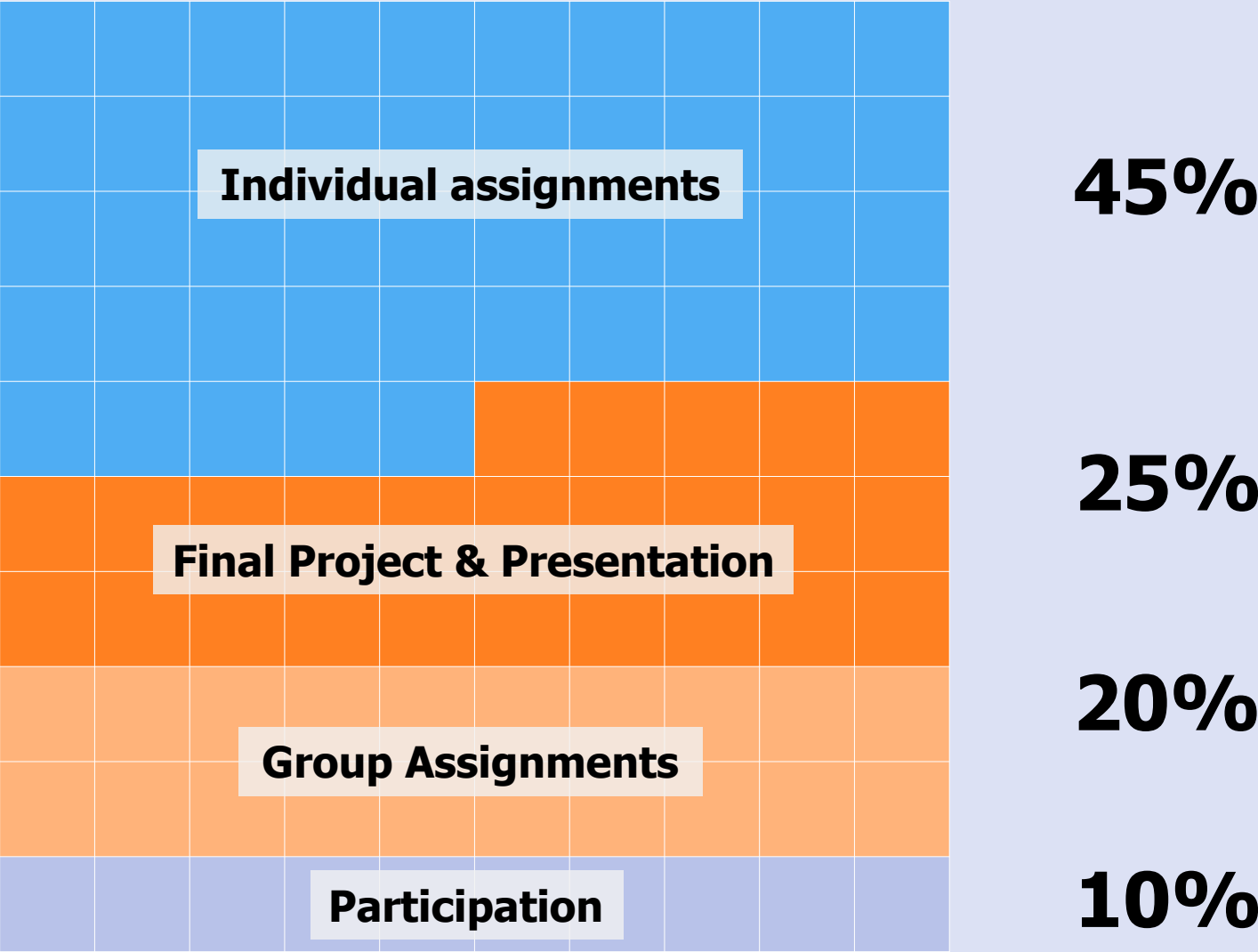
Option A:



Option B:



Evaluation



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
	Week 1	image fix 2		7 days ago

It's on GitHub!

https://github.com/albertkun/21S-191A

Course Outline

Week	Lectures	Labs
1	GIS, Data, Ethics	GitHub and QGIS
2	Critical Cartography and Civil Society	HTML, CSS, JavaScript
3	Open Source vs. Closed Source	HTML, CSS, JavaScript
4	Web Development and Ethics	HTML, CSS, JavaScript
5	Going from data to map	HTML, CSS, JavaScript
6	Coding as Collaboration	GitHub and HTML, CSS, JavaScript
7	Activism and Tech	HTML, CSS, JavaScript
8	Limits of web development	HTML, CSS, JavaScript
9	Connecting Civil Society and Tech	HTML, CSS, JavaScript
10	The future of web mapping	HTML, CSS, JavaScript

 = Guest Lecturer

Course Software Requirements*

QGIS –
mapping



git



GitHub

– completing assignments



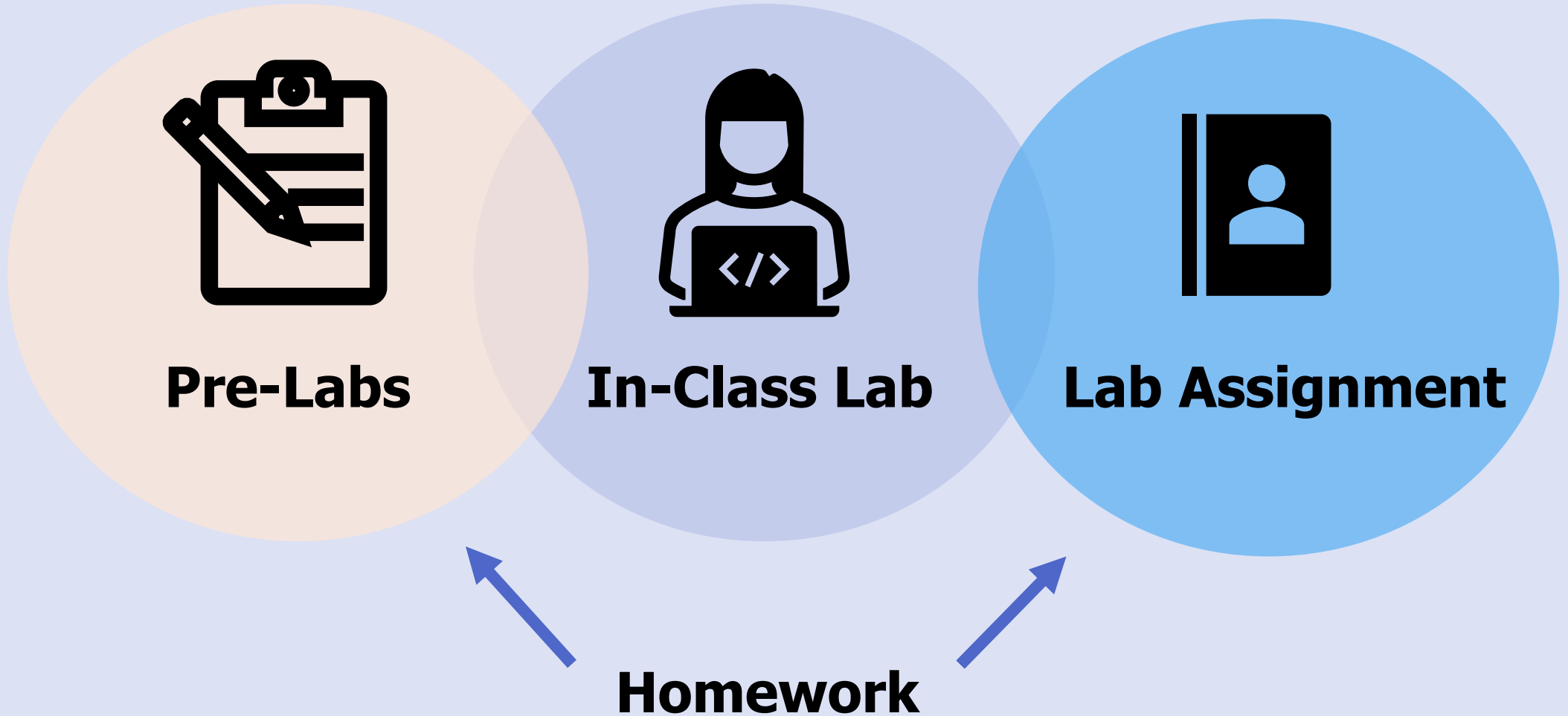
VS Code – writing code



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 on the class discussion forum**

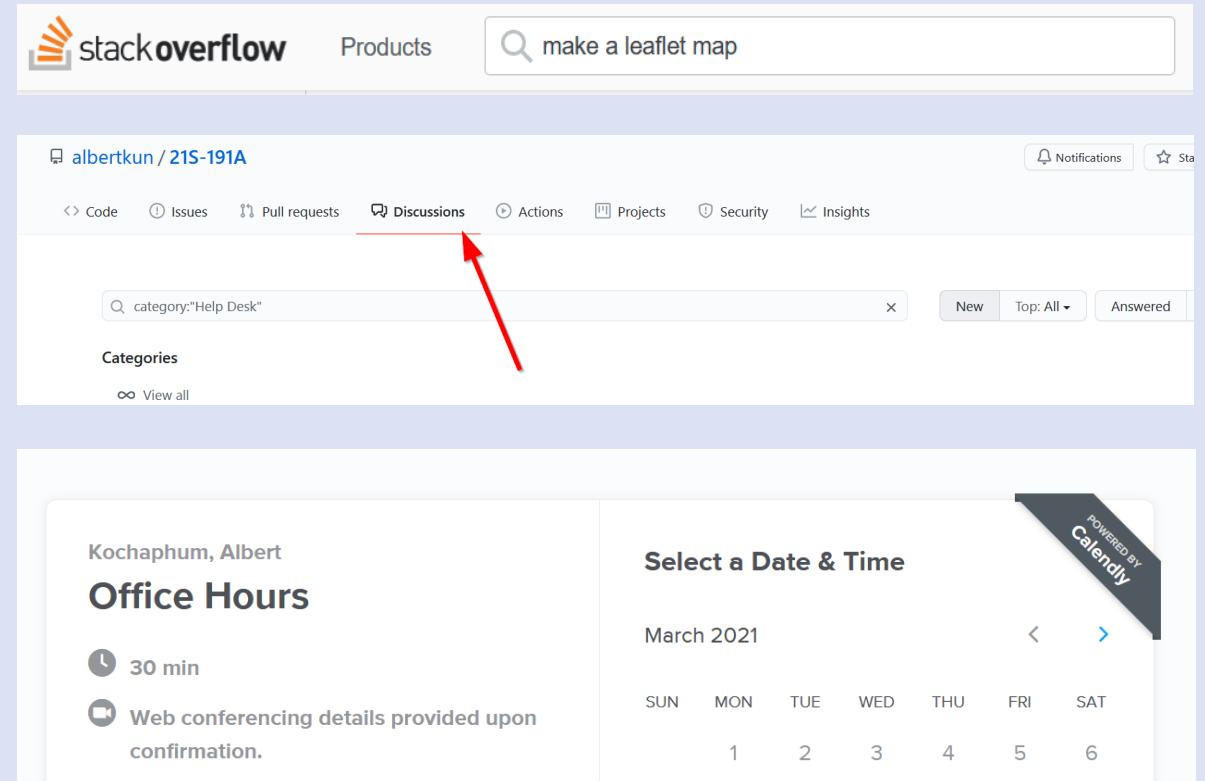
<https://github.com/albertkun/21S-191A/discussions>

- **Drop by office hours**

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

- **Email the instructor**

albertkun@oarc.ucla.edu



Core Principles in summary:



Any questions about the course syllabus?

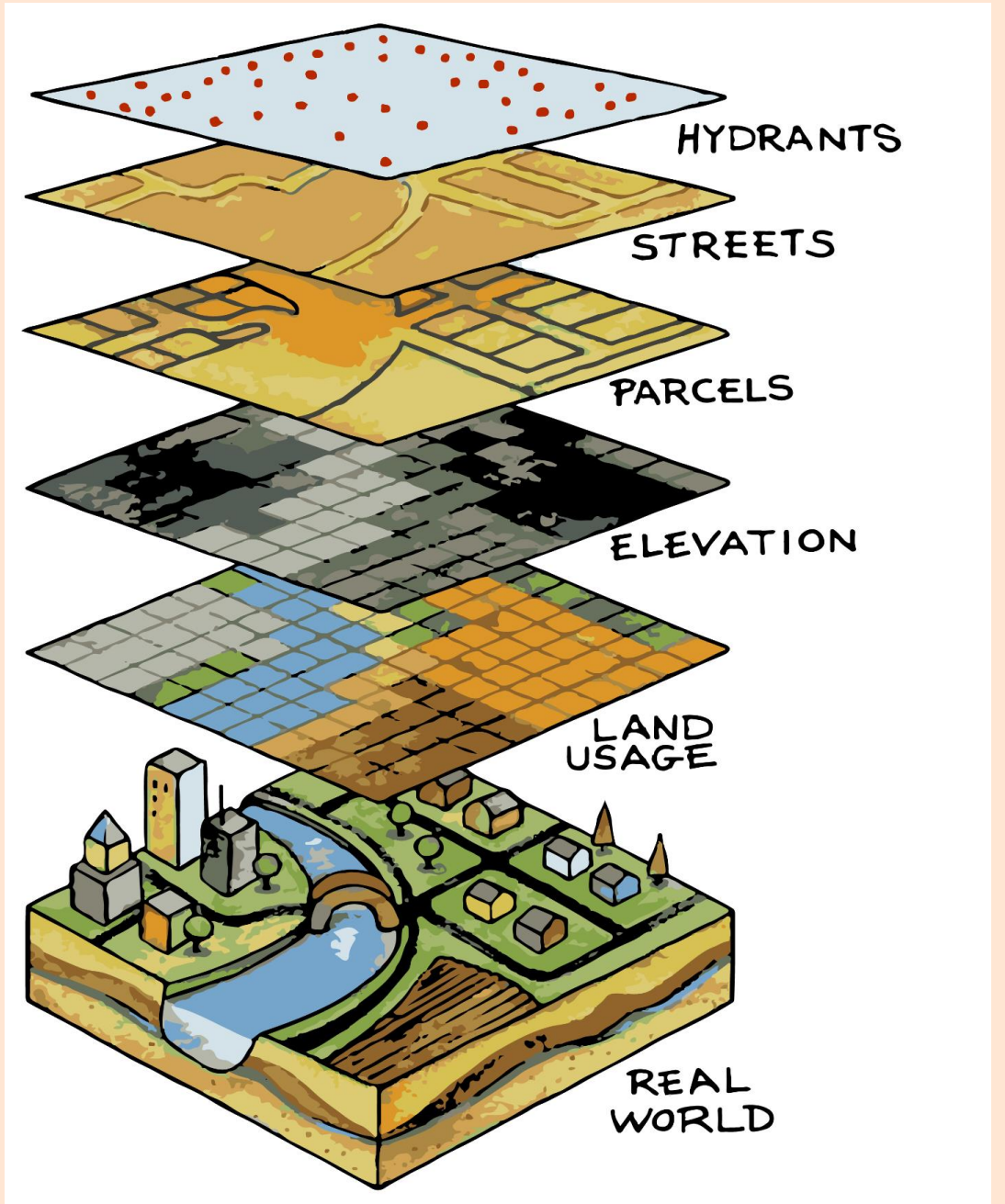
009

- Comment: we can use Github Desktop: **Still install Git**
- Will we use SQL logic for this as well? **No ☹️**
- Could we use python for mapping, if we already know how to use it? **Not supported ☹️**
- Is there a site featuring GIS projects or anything like that where we could get inspiration for working with the tool? **Check extra resources**
- Can we pick our partners today? **No ☹️**
- How did you decide what memes to put on your PowerPoint? **Punny-ness**
- Are labs individual or in groups? **Individual**
- Is the syllabus also available in pdf? (No worries if not) **Yes on CCLE and GitHub**
- Is there a lab due every week? How are they graded? **Yes, graded on code and write-up**
- No questions so far
- Where are the installation guides for QGIS? **There are guides online**
- Are there any websites you recommend we learn for coding? **Depends on the language!**

GIS, Data, and Ethics

Albert Kochaphum
Lecture 1 | March 30th, 2021

GIS



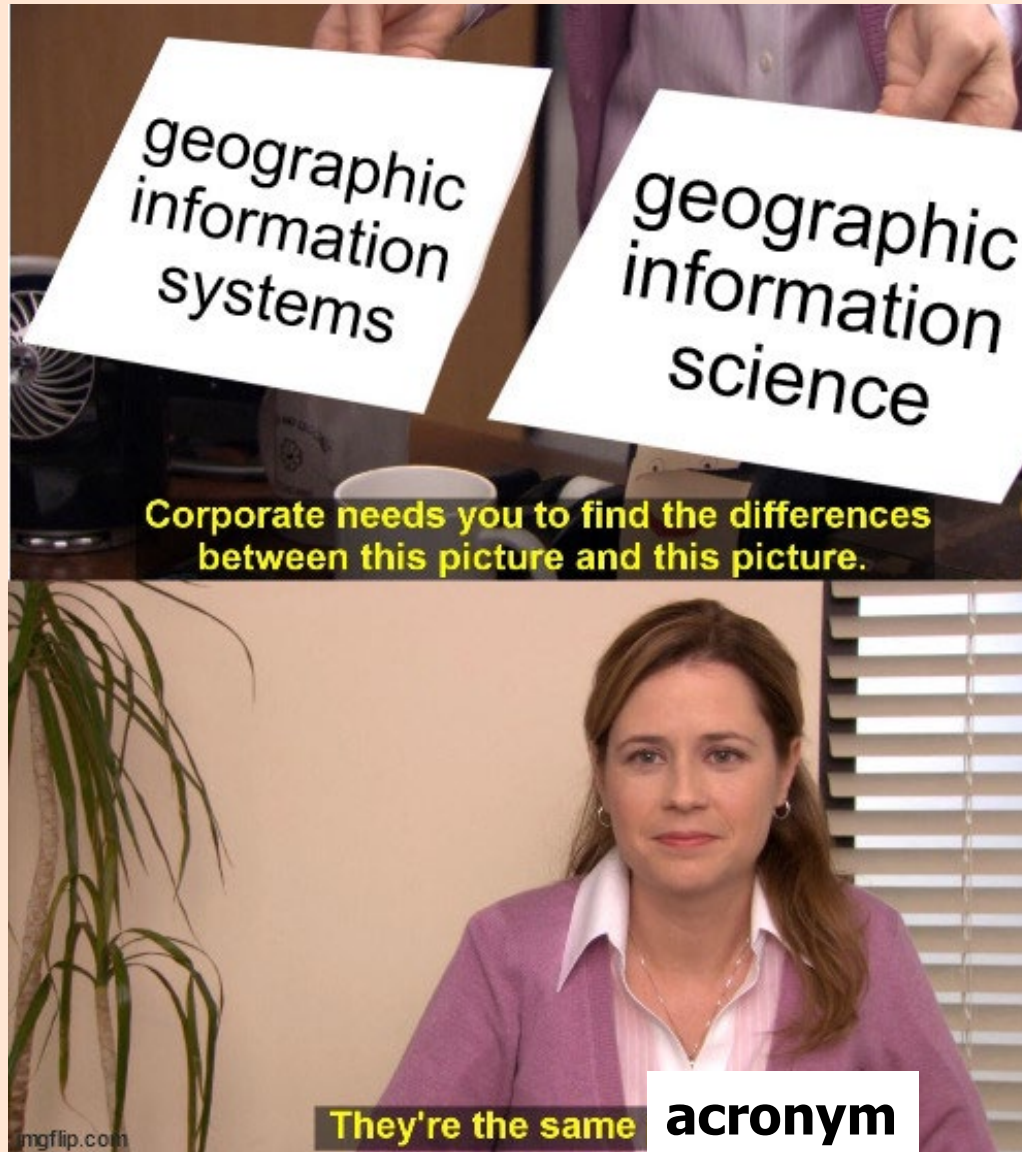
What is GIS?

A) Geographic Information Systems

or

B) Geographic Information Science

What is GIS?



What is GIS?

GISystems

=



Spatial tools

GIScience

=



Spatial thinking

Examples of GIS

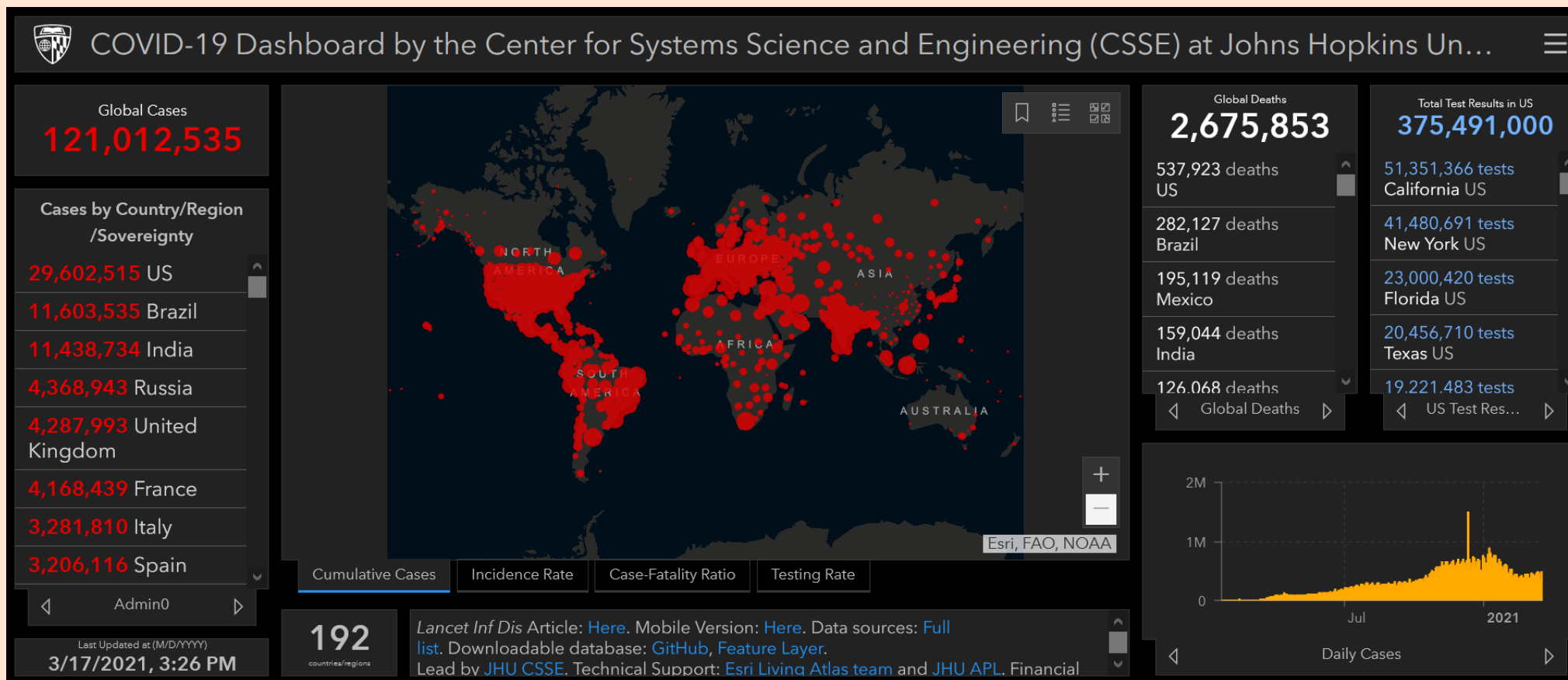
The screenshot displays the Google Maps interface for a route from Los Angeles International Airport (LAX) to the University of California, Los Angeles (UCLA). The left sidebar contains the following information:

- 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, \$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 callout box indicates a 12-minute bus ride from LAX. The map includes various landmarks, highways, and a satellite view option.

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

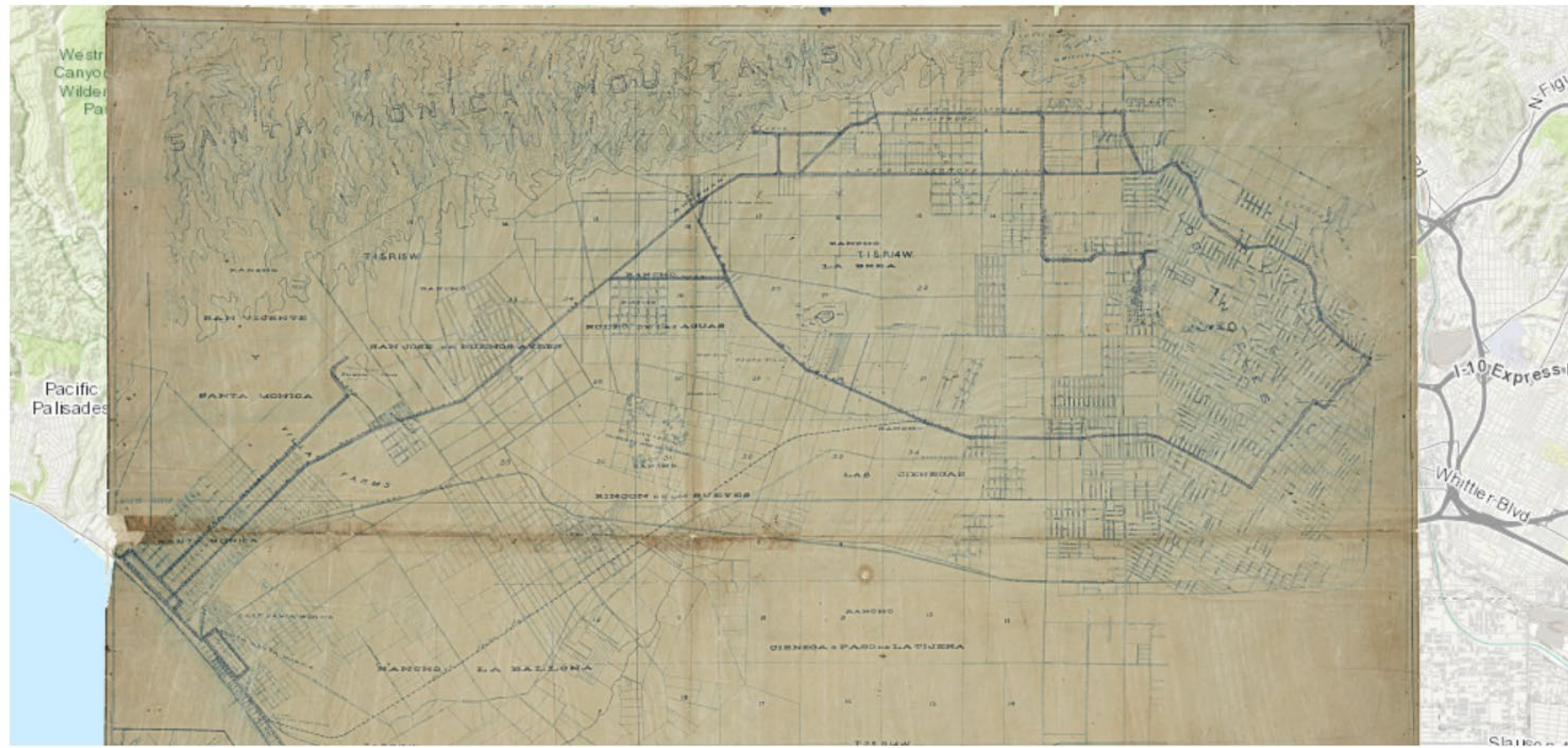
Examples of GIS



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

Are historical maps GIS?

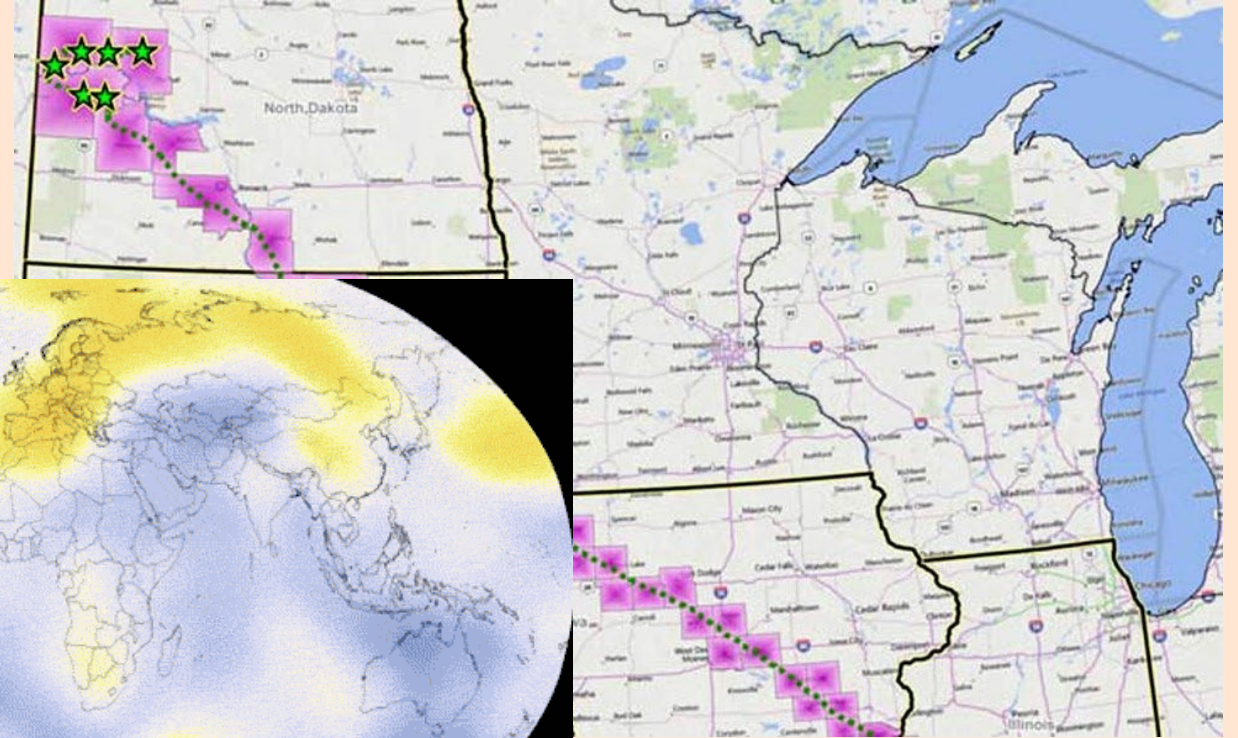
Map of the Los Angeles-Pacific R.R.



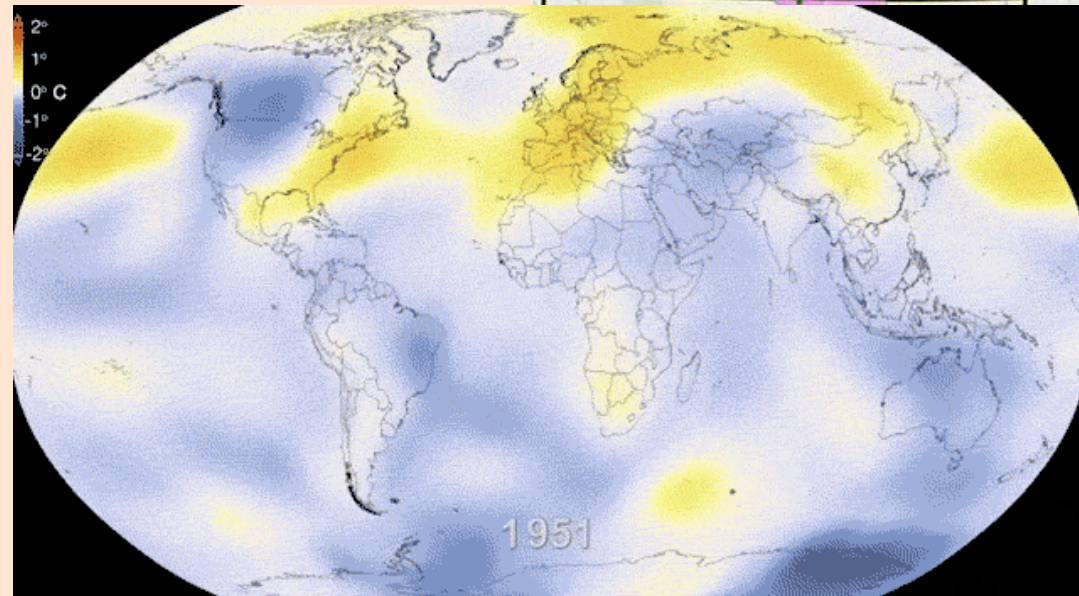
HyperCities Map Library, <http://www.hypercities.com/maplibrary/index.html>

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	↑ ↓	↑ ↓	↑ ↓
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



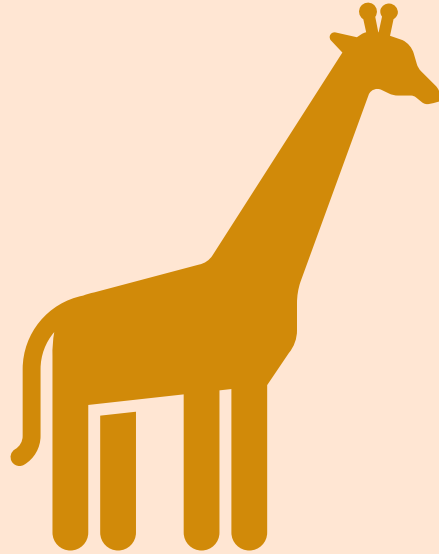
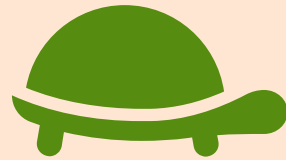
Participatory GIS/Community-Based GIS



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

Was type of data was collected in the Student Survey?

0 2 0

Quantitative

0 %

Qualitative

65 %

None of the above, you lie!

0 %

All of the above

35 %

Critical Data Studies



Problems with a data-only approach:

**Assumes Social problems
are**

Knowable

Controllable

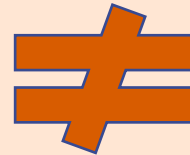
Rational

Neutral

Technocratic

Objective

Non-ideological



Voices of community

Power relations

Power Inequalities

Alternative data forms:

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, there are three buttons: "Edit", "History", and "Export". A map is partially visible in the background.

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

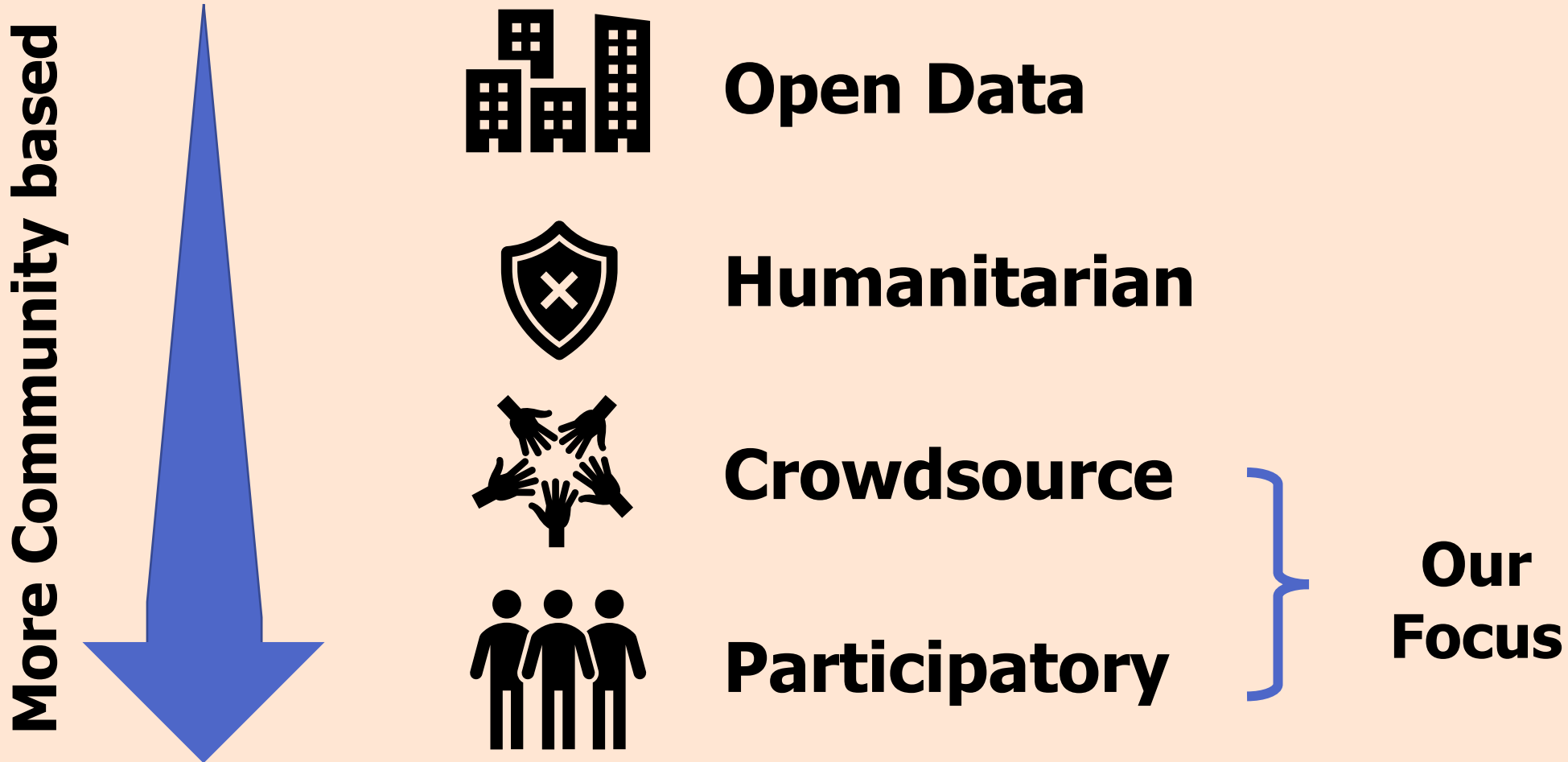
BACK

NEXT

2 Date of Harassment



Alternative data forms:



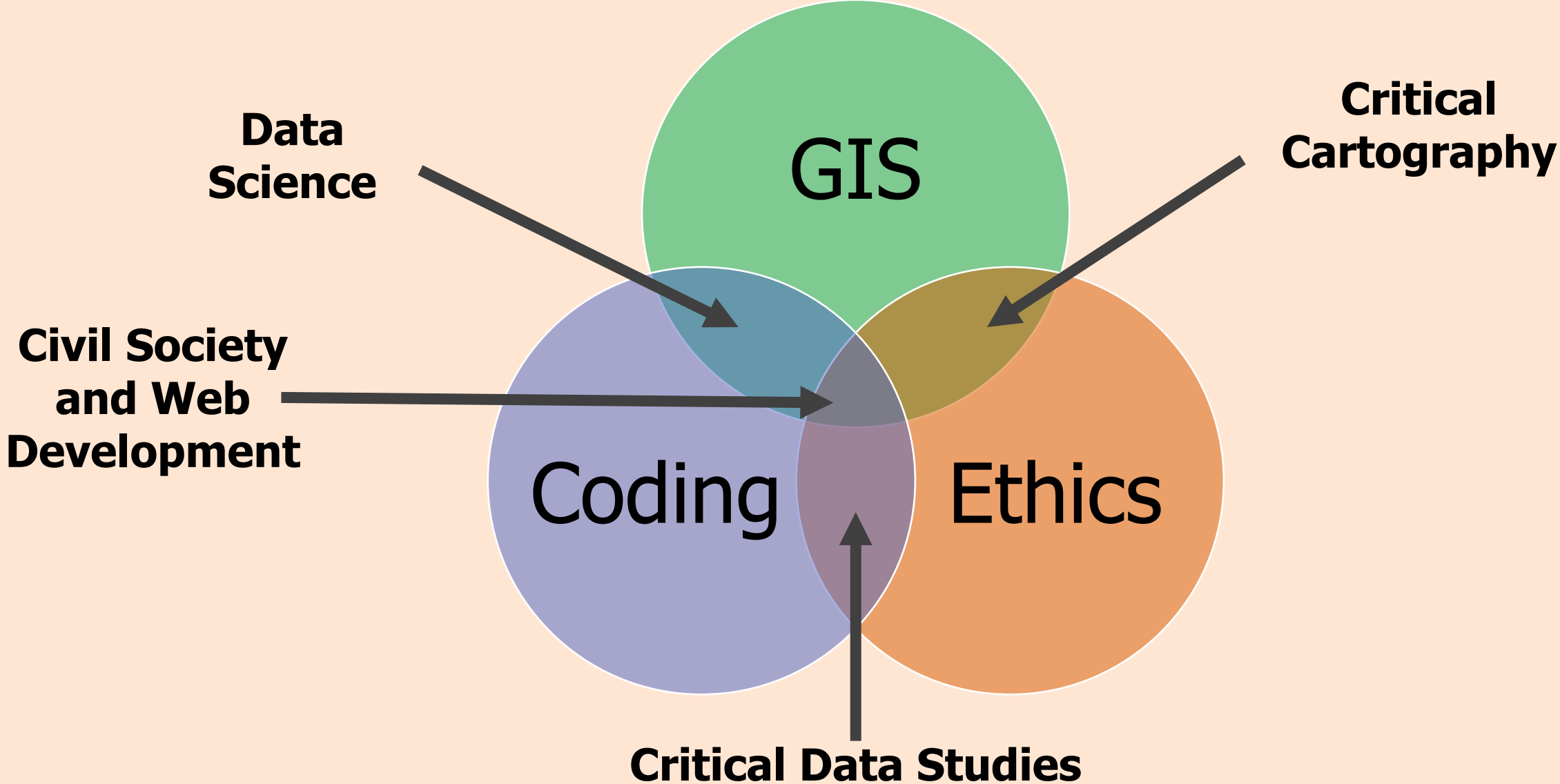
Ethics

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



**Data
Science**

GIS

**Critical
Cartography**

**Civil Society
and Web
Development**

Coding

Ethics

Critical Data Studies

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?**

First Assignments

Complete the following:

Due Thursday 4/1:

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.



Feedback

<https://tinyurl.com/21S191Feedback>

Thoughts about using Slido?

Not helpful

0%

Distracting

5%

Unsure, keep trying it

60%

Useful

25%

Very engaging

10%



Question	Reply
this is a dumb q but what is the purpose of github	GitHub is used to share code and content.
What's your favorite color	Blue
How do we know if we installed the softwares properly ?	you should be able to launch QGIS and VS Code, for Git, check the guides for more info, but in general launch the terminal (mac) or command line (pc) and then run 'git --version'.
For labs, essentially do you go through all the necessary codes with us?	yes, with step-by-step instructions
Where's the link for scheduling office hours?	https://calendly.com/albertkun/office-hours or direct email
Do you like dogs or cats	cats! but dog are ok too
What's your favorite animal?	Tough question, but probably quokkas
On my terminal, I did brew install git, is that all i need to do to get git? How do i access it through my laptop	correct, but there are some steps you need to do afterwards, like Git config, please check the guides for more info.
If i got git before github, do i uninstall git?	nope, no need to! you will need to run the git config after you sign up for GitHub though