



Join at
slido.com
#ucla

Web Development and GIS for Social Change

Critical Data for Transforming Civil Society

Albert S. Kochaphum

Week 1 | March 30th, 2021

How are you feeling?

0 | 1 | 9

A little frazzled
sleepy

STOKED!!!!

fine
lightly optimistic

excited

Break was too short

sleepy but good

pretty good

Good sore Tired
hungry Slept at 4 am

Exhausted and excited

Today's Agenda

Wrap-up

Introductions

Course details

Lecture

Discussion



Introductions



About me!

GIS + code = ftw

bikeclist



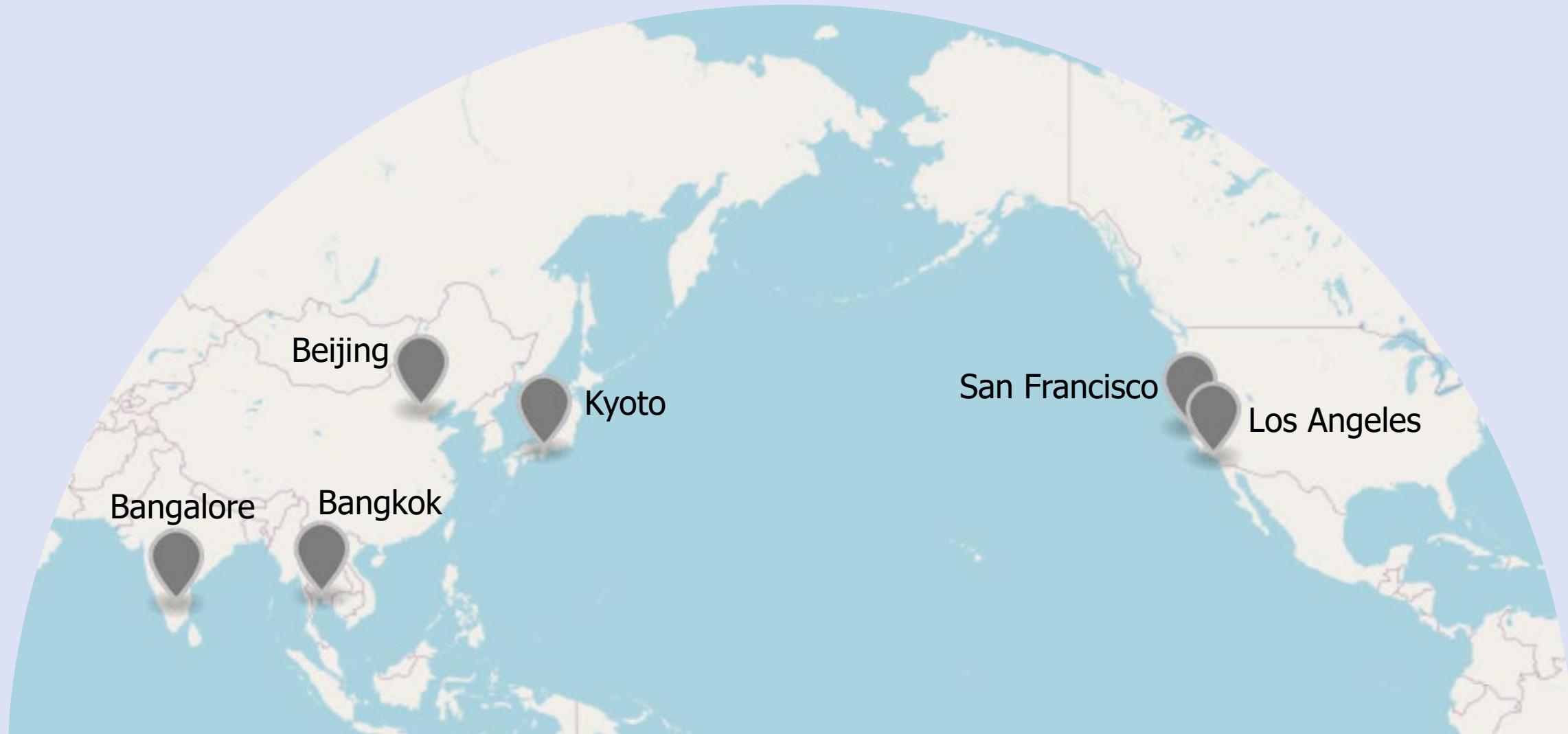
made in san francisco

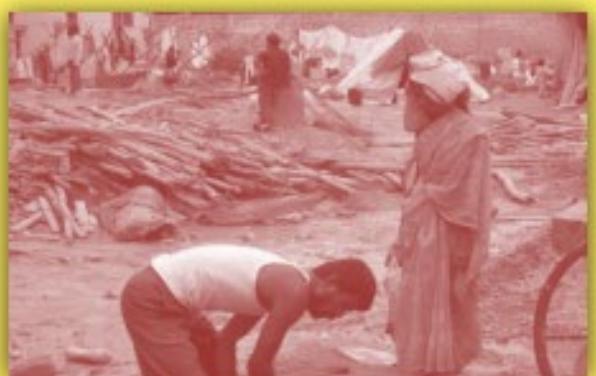
omg, climate change :(

wow! Much tarrible puns

can we haz
more social equity?

More about me











Jane Map

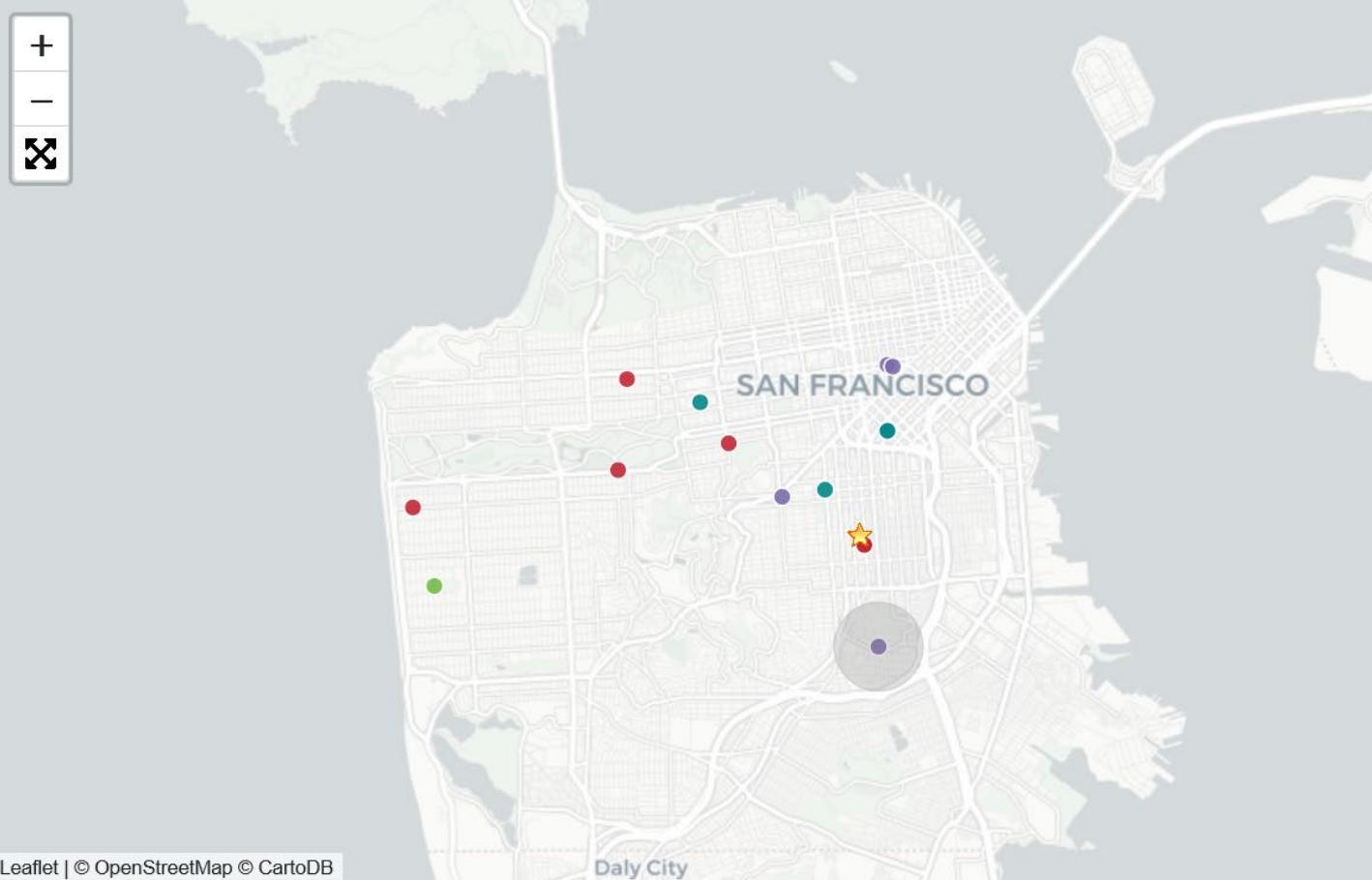
Let's get started on electing a progressive mayor for San Francisco.

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

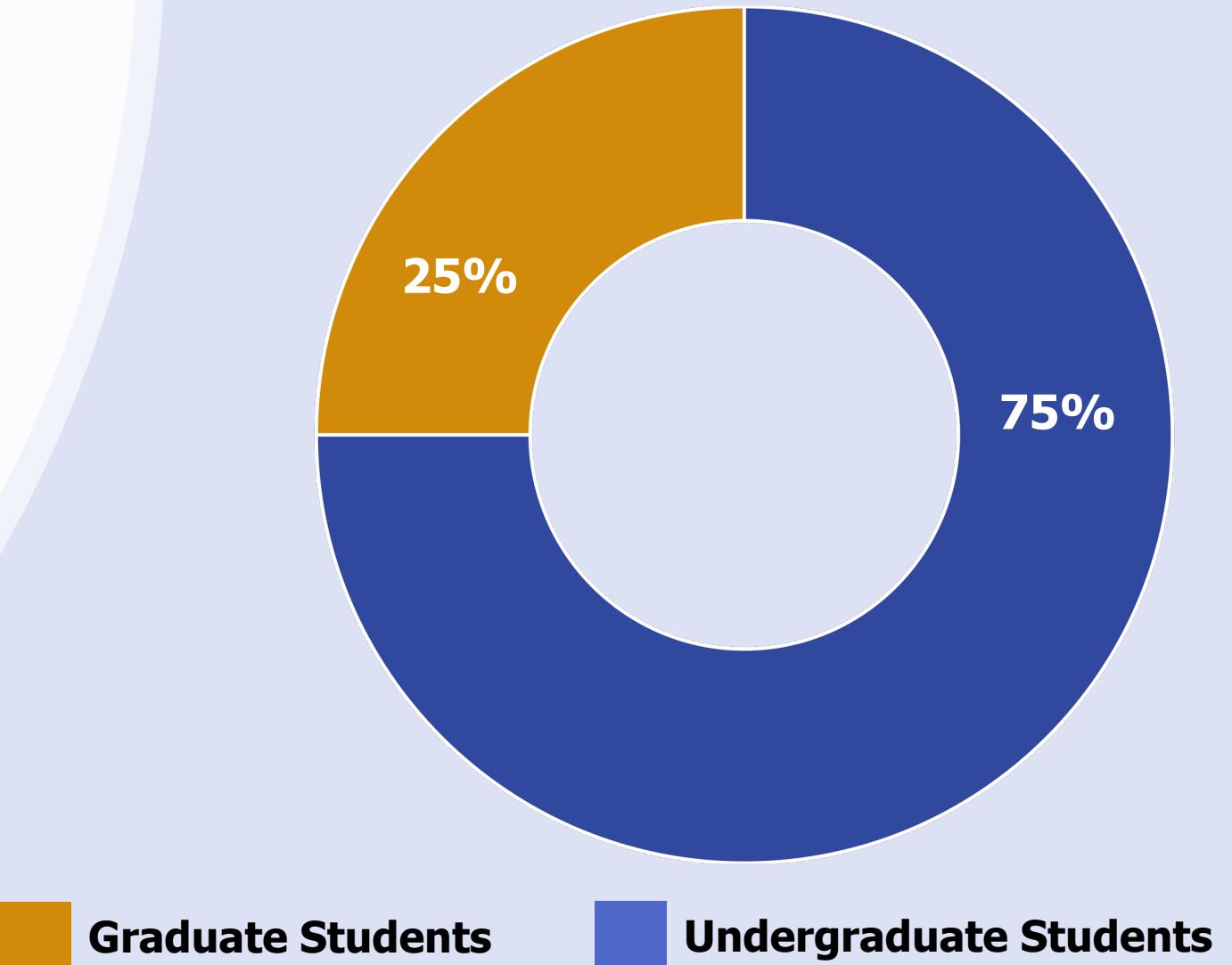
RSVP

Get Directions

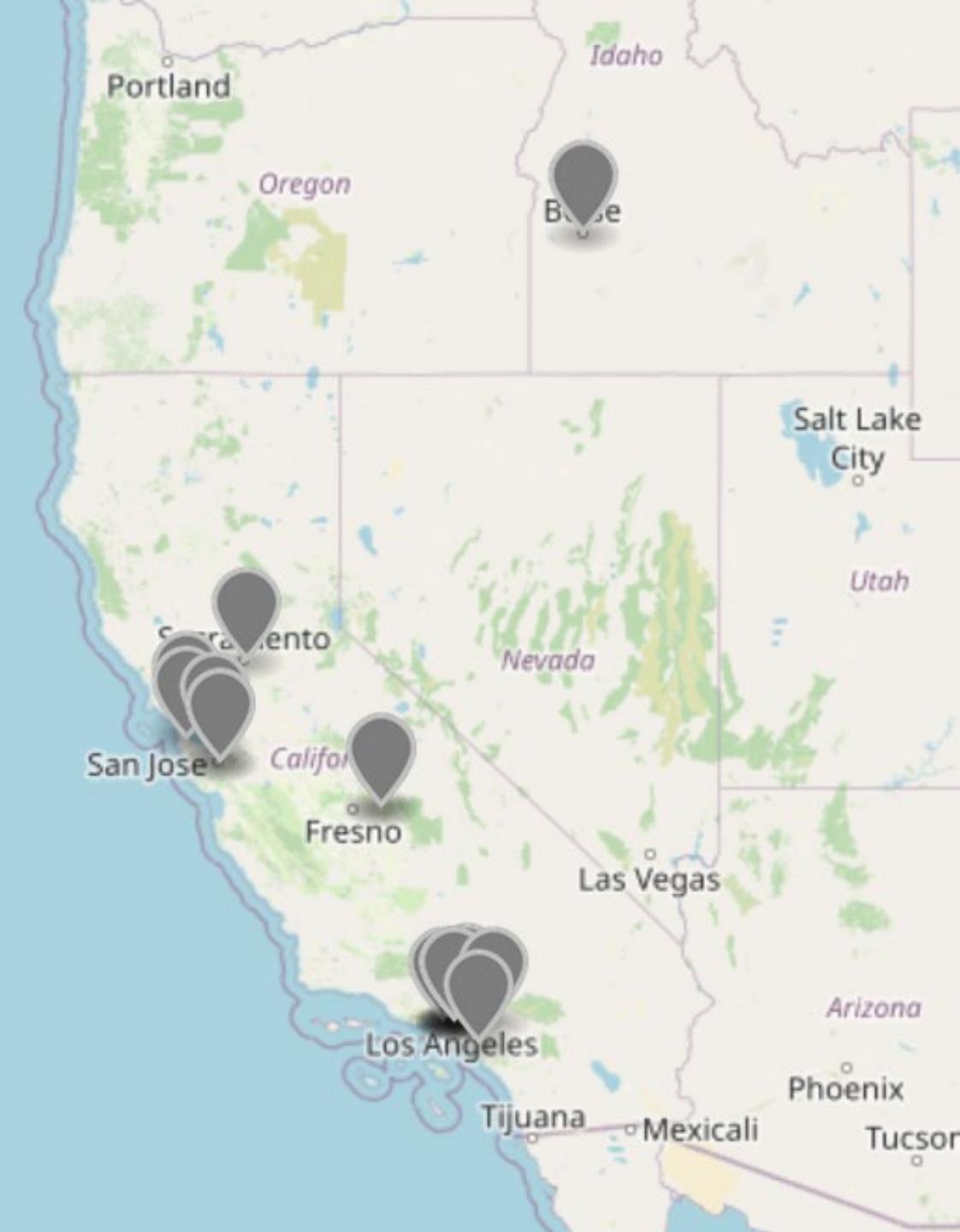
What type of web application we will be making!

About you!

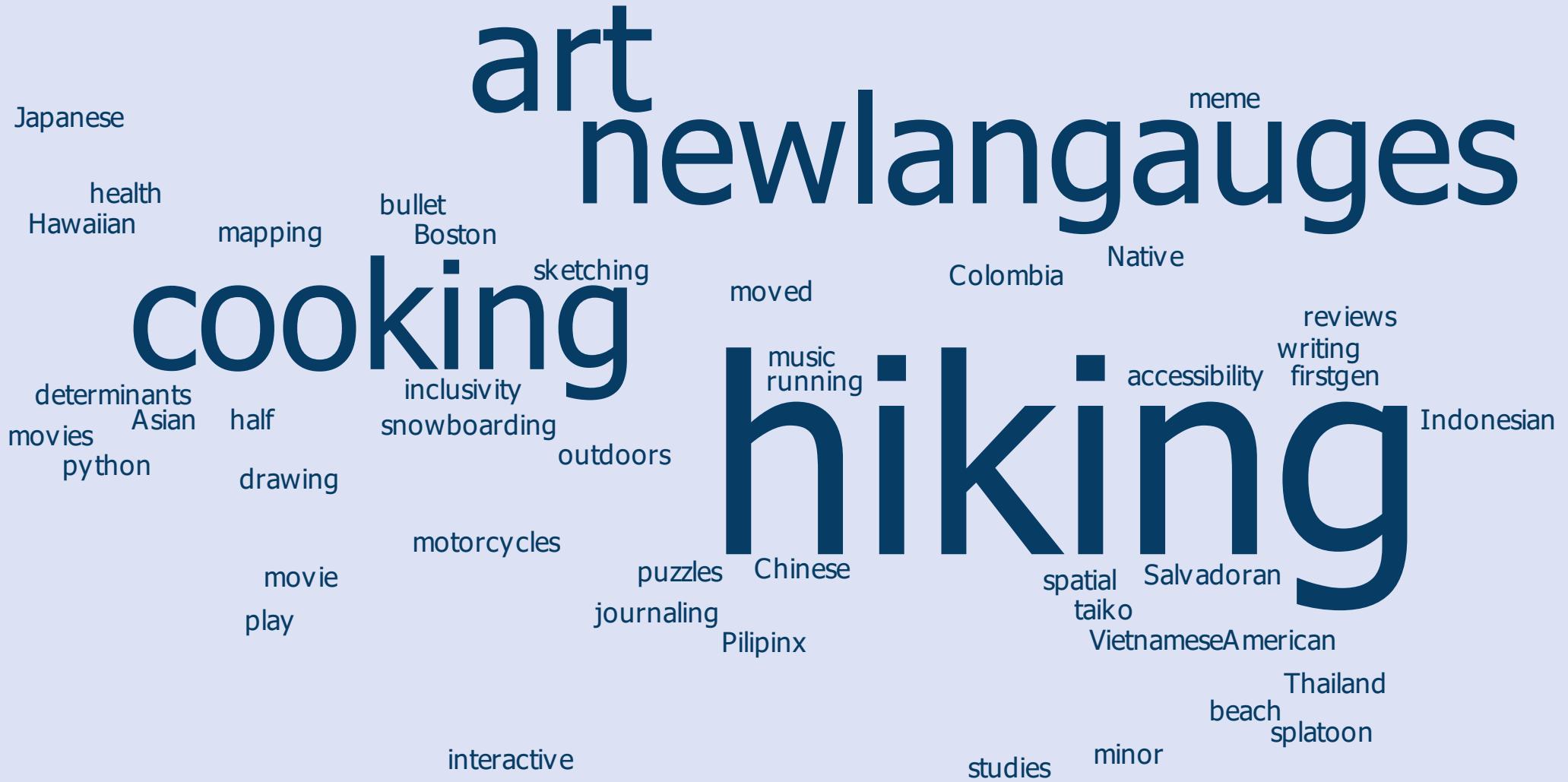
Enrolled Student Status



About you!



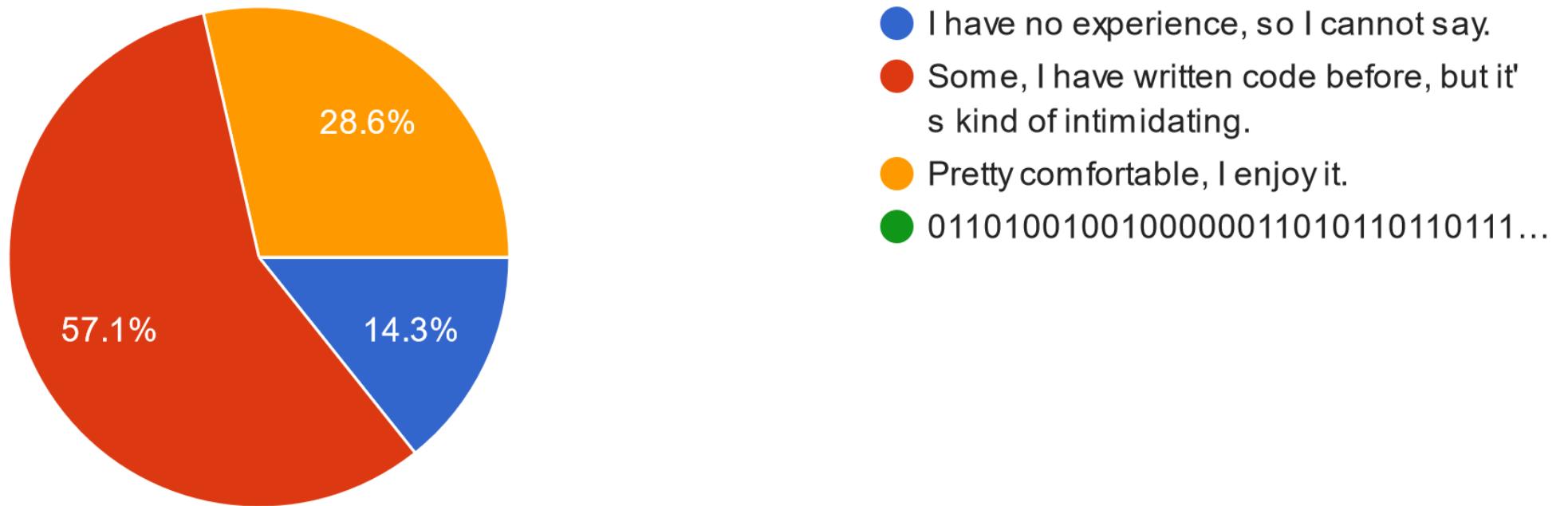
About you!



About you! Web Development

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

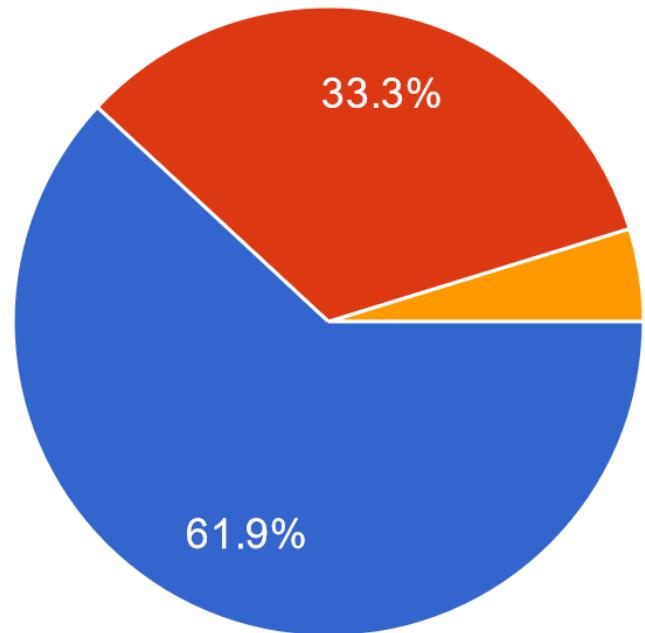
21 responses



About you! GIS

What is your familiarity with GIS?

21 responses

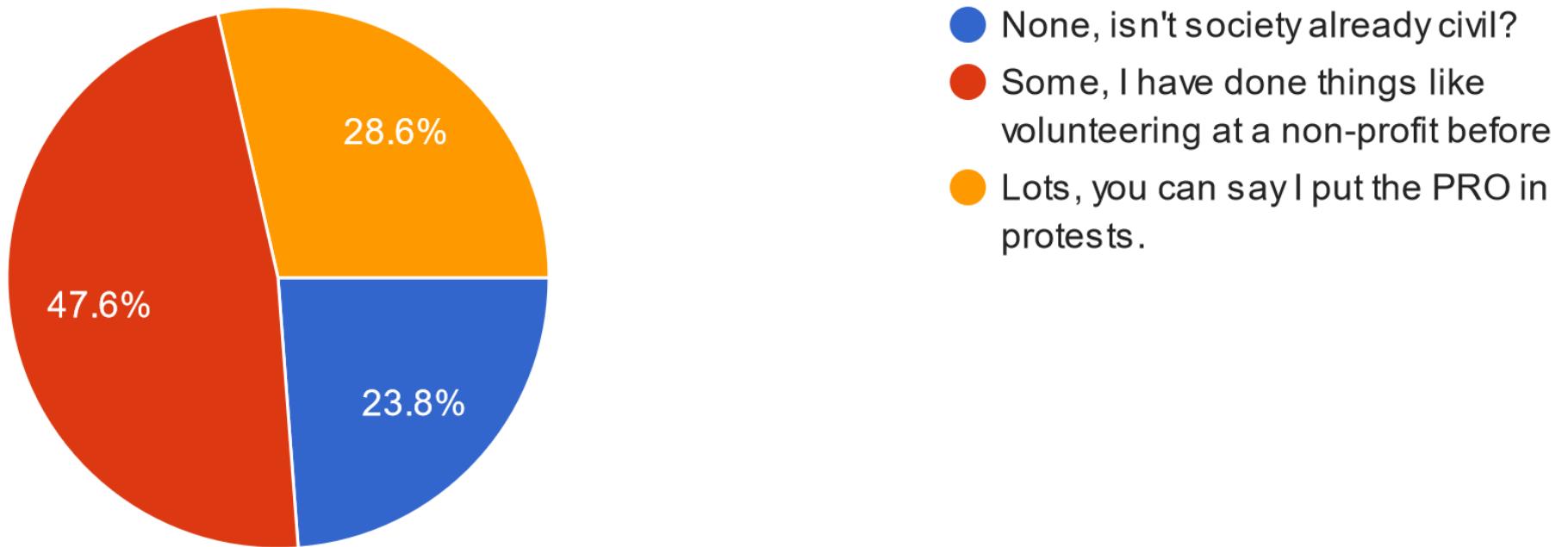


- None, the course title was the first time I heard about GIS
- Some, I got the GIST of it and I can make some maps
- Lots, you can say I am a spatial GenluS!

About you! Civil Society

What is your experience with civil society?

21 responses



About you! Data

What is your familiarity with cleaning data?

21 responses



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

Civic Engagement

Critical Cartography

Learning objectives summarized:

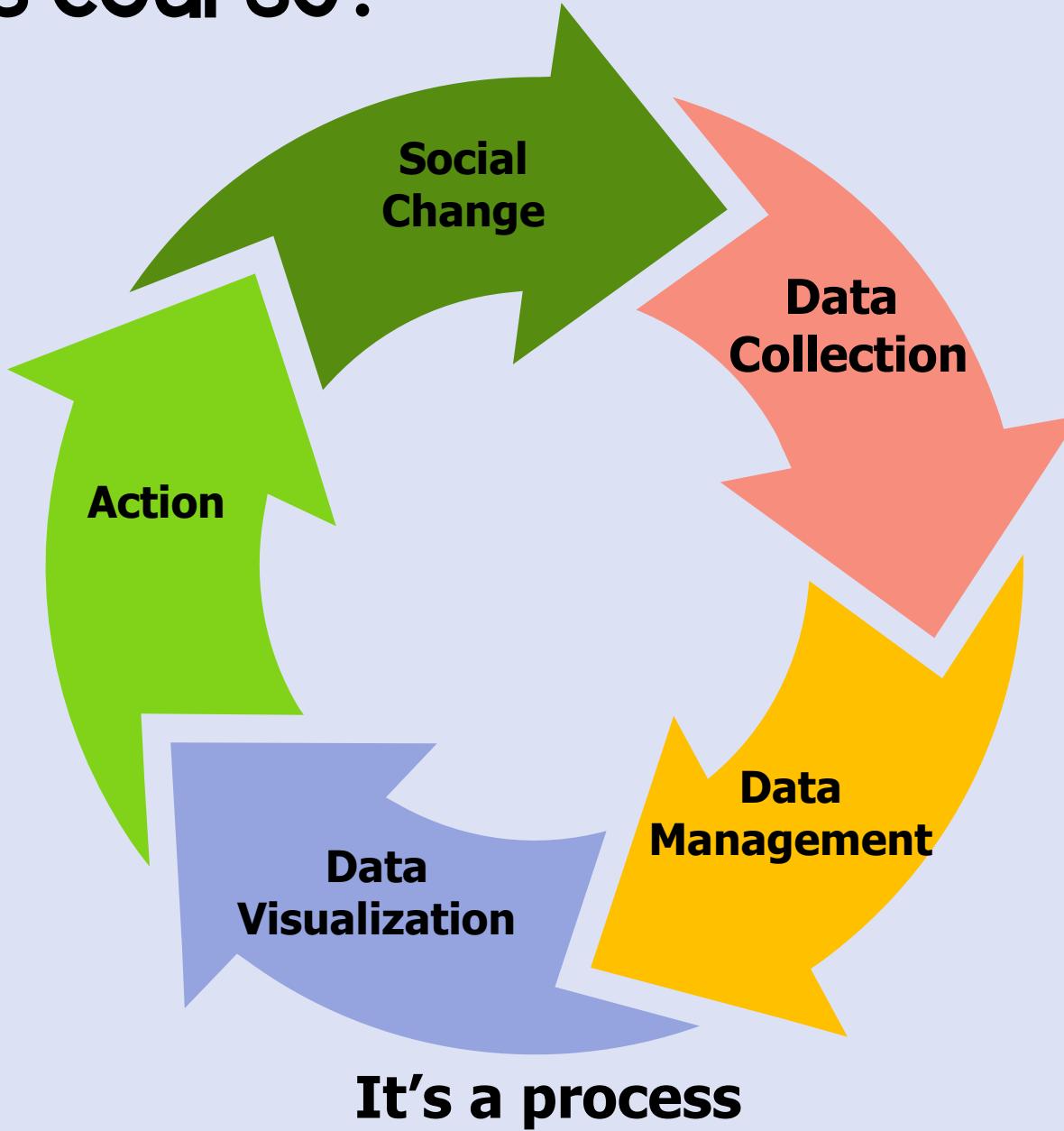
I HAVE NO IDEA WHAT I AM DOING





THIS ISN'T SO RUFF

What is this course?



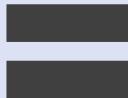
What is this course?



Ethics



Mapping



Coding



Social Change

What is this course, really?



An example 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

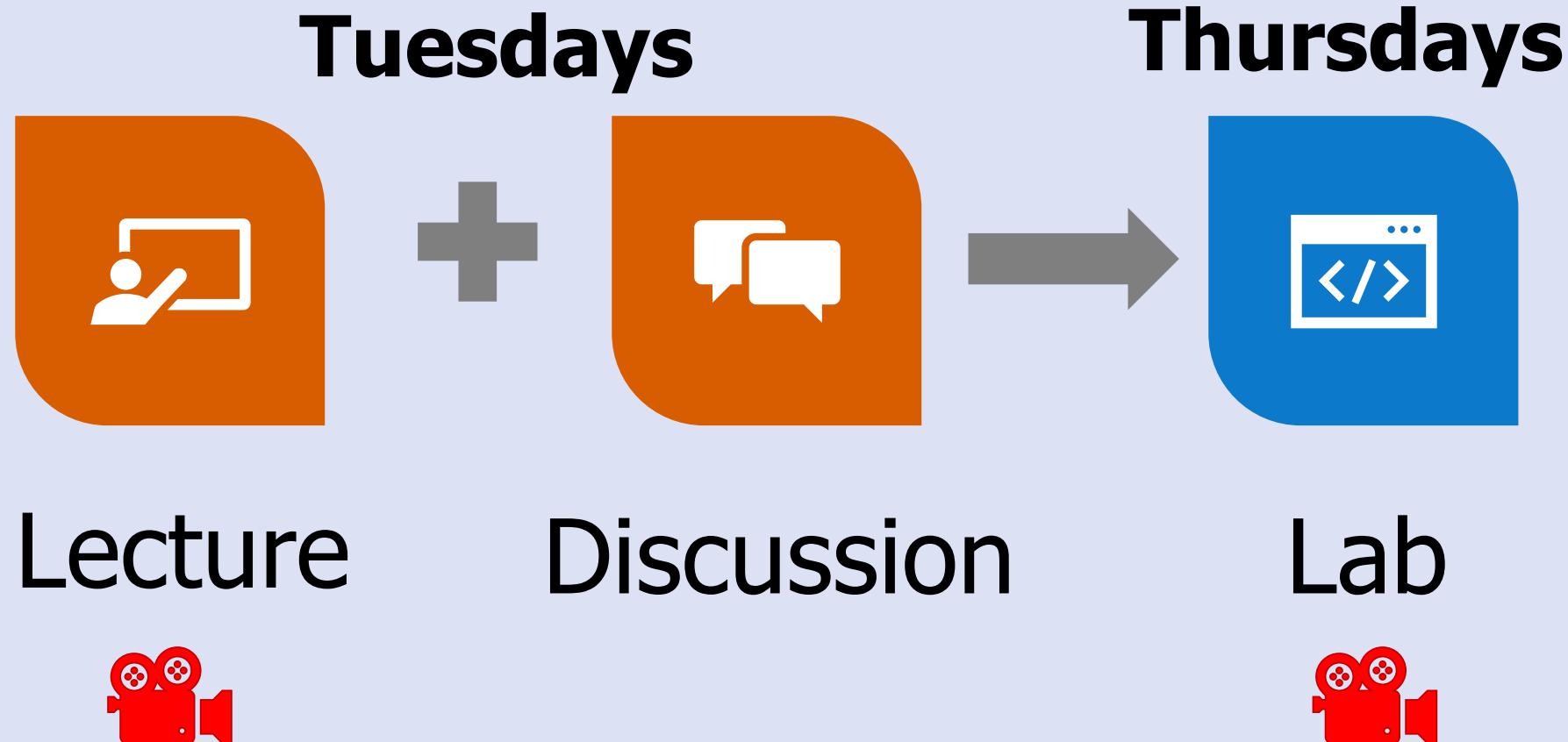
Type

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

www.hatecrime.map.com/covid

Course Details

General Course Structure *



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

Assignments

Individual



Readings

Weekly

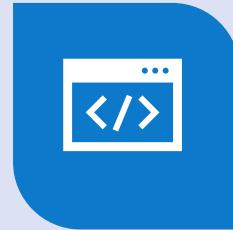


Labs



Posts

Group



Project Milestones

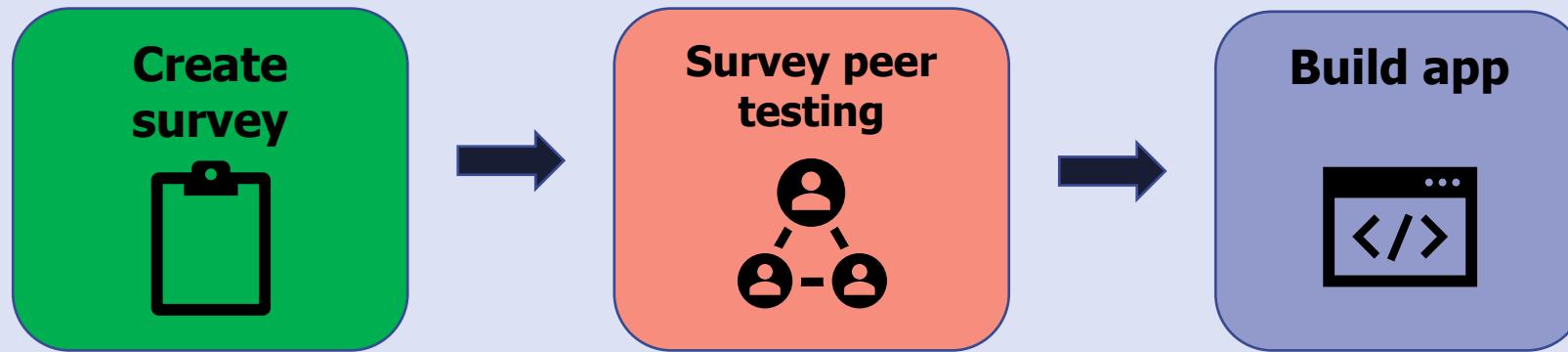
Intermittent



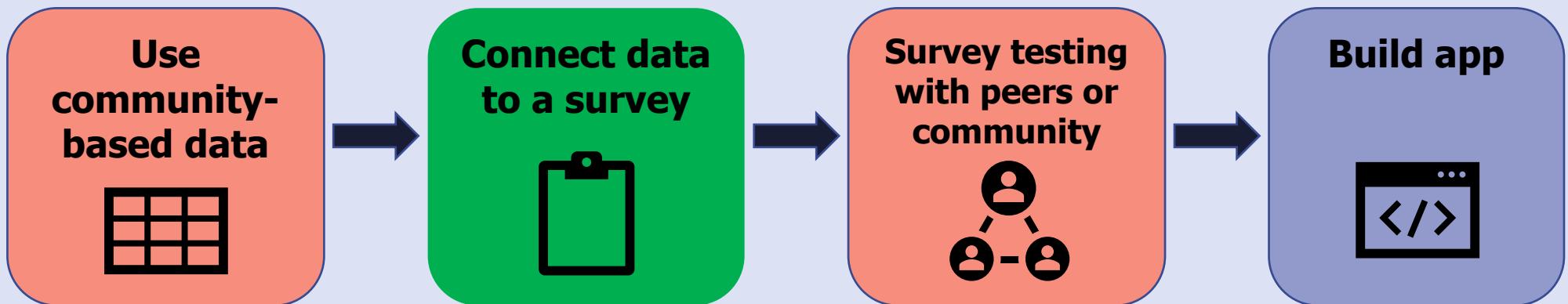
Final Project

Final Group Project

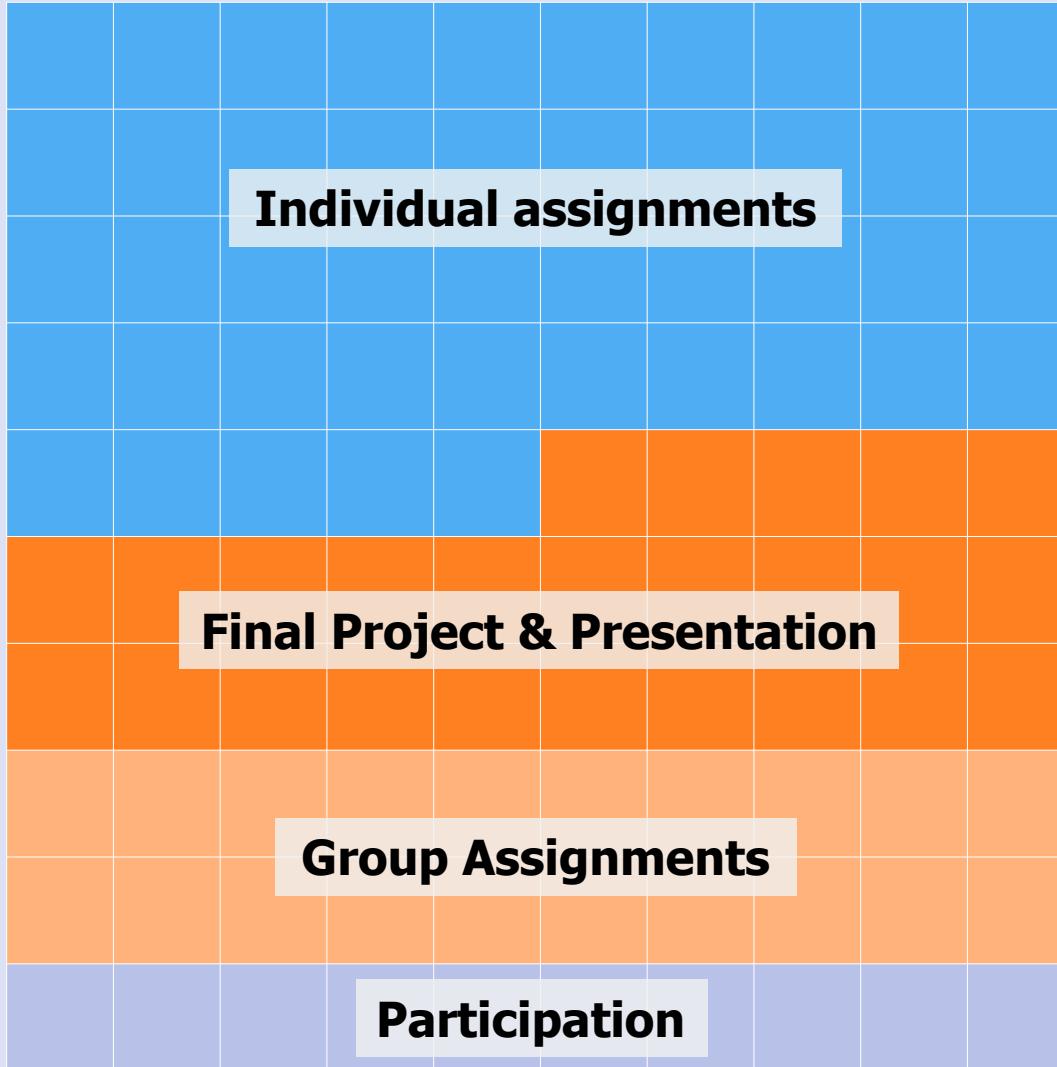
Option A:



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

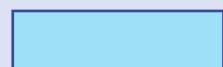
7 days ago

It's on GitHub!

<https://github.com/albertkun/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



– completing assignments



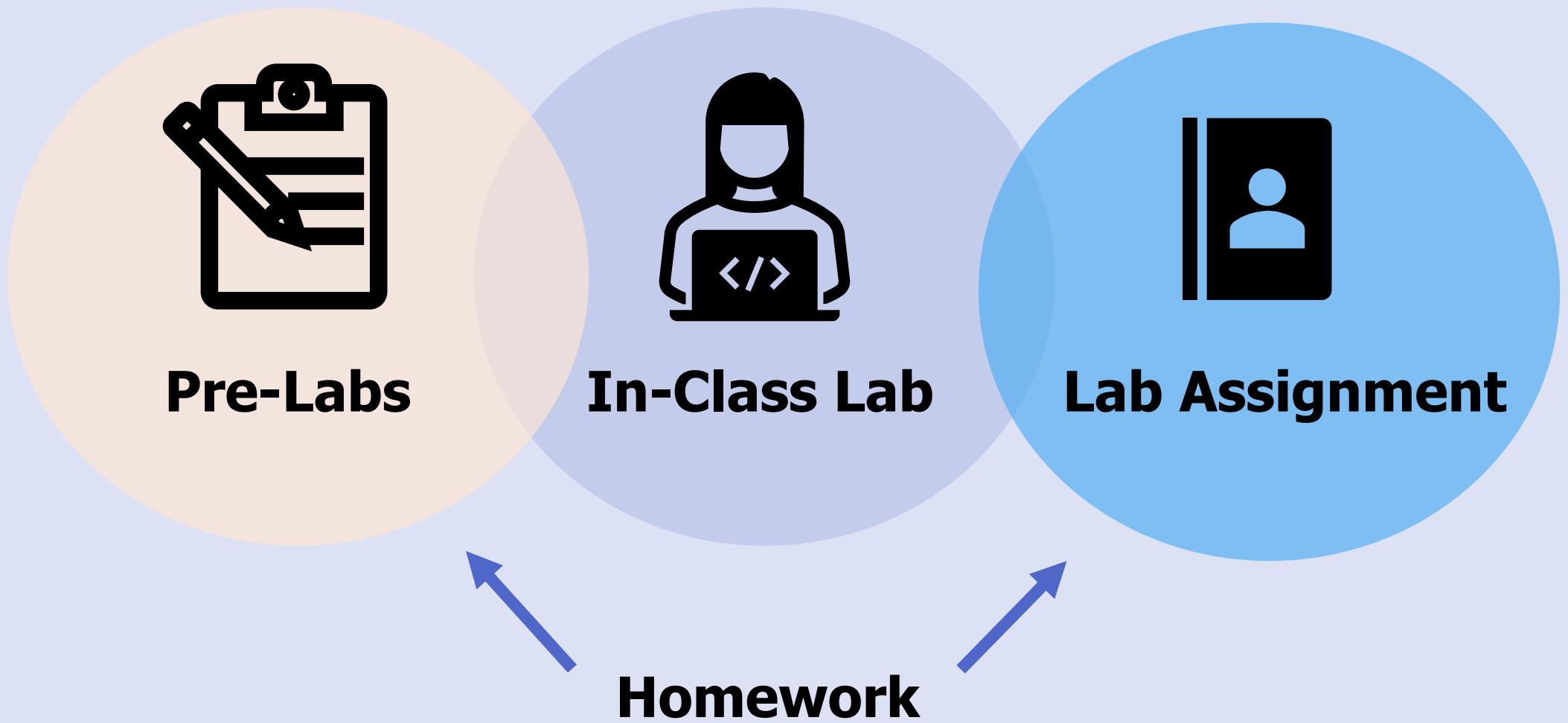
VS Code – writing code



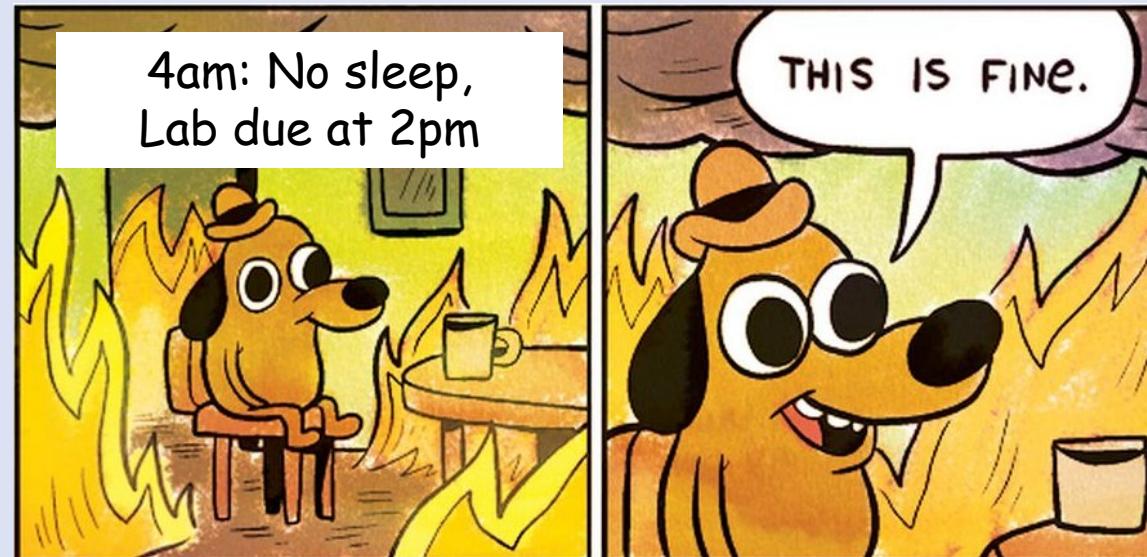
Firefox – web debugging

* 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://www.stackoverflow.com)

- **Ask on the class discussion forum**

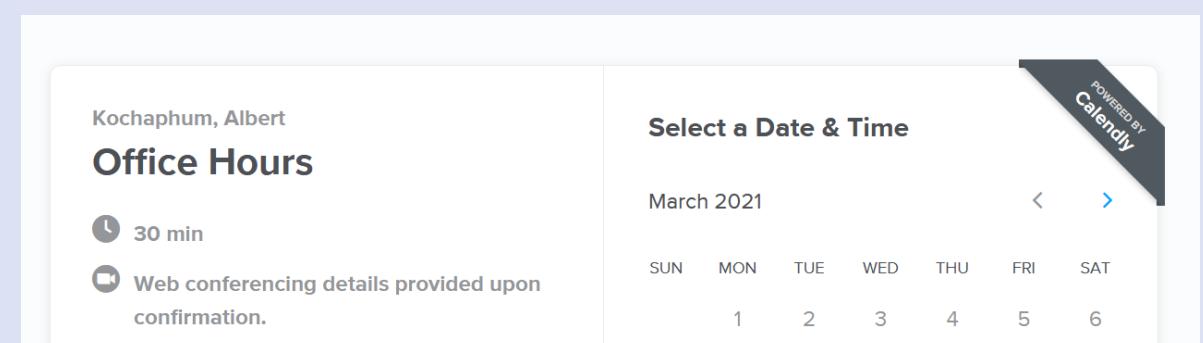
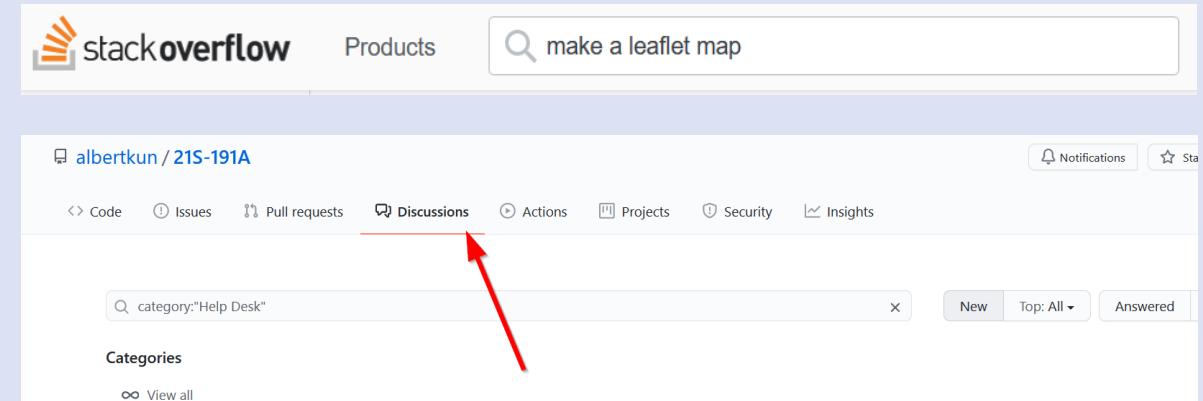
<https://github.com/albertkun/21S-191A/discussions>

- **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?

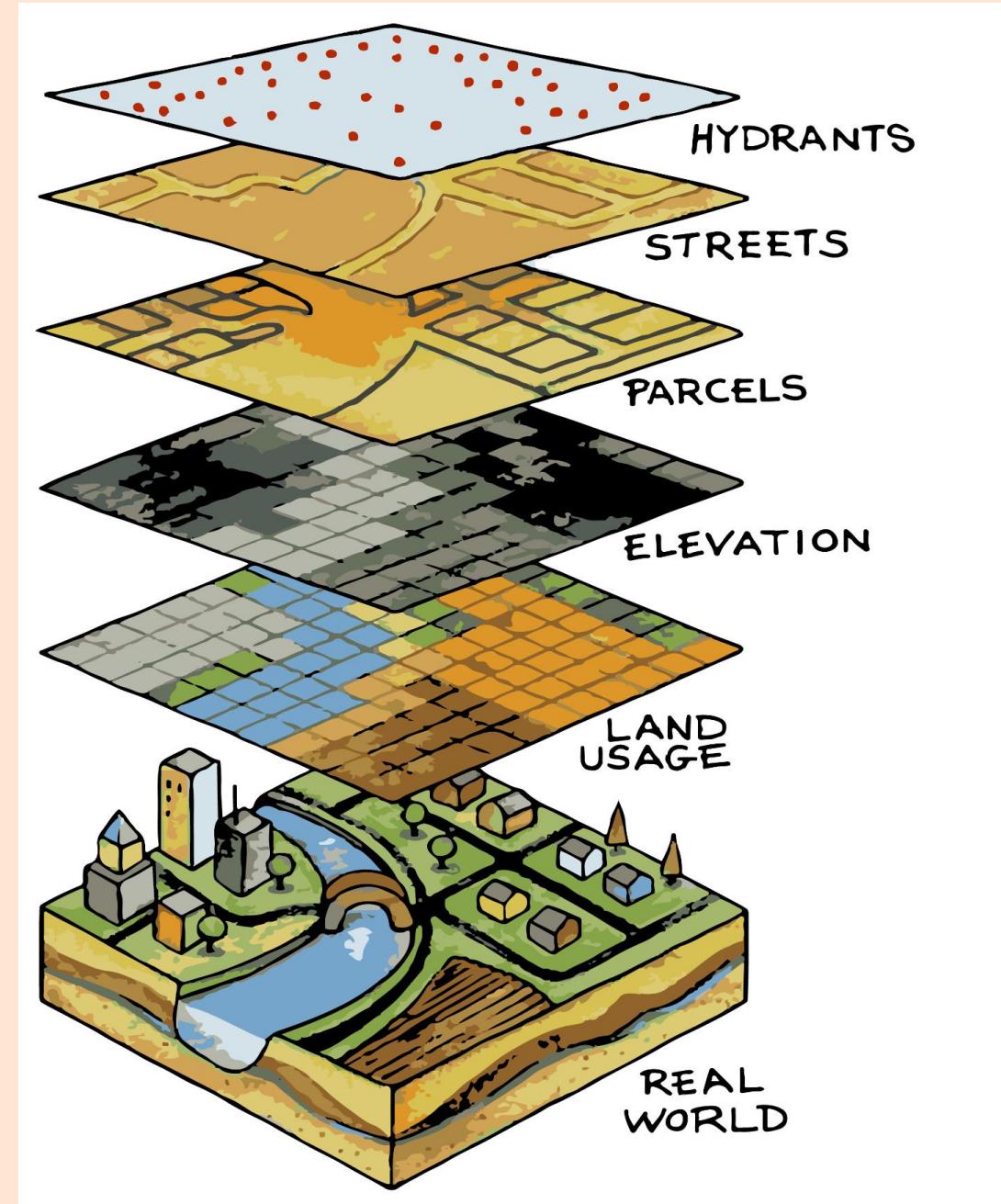
009

- 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



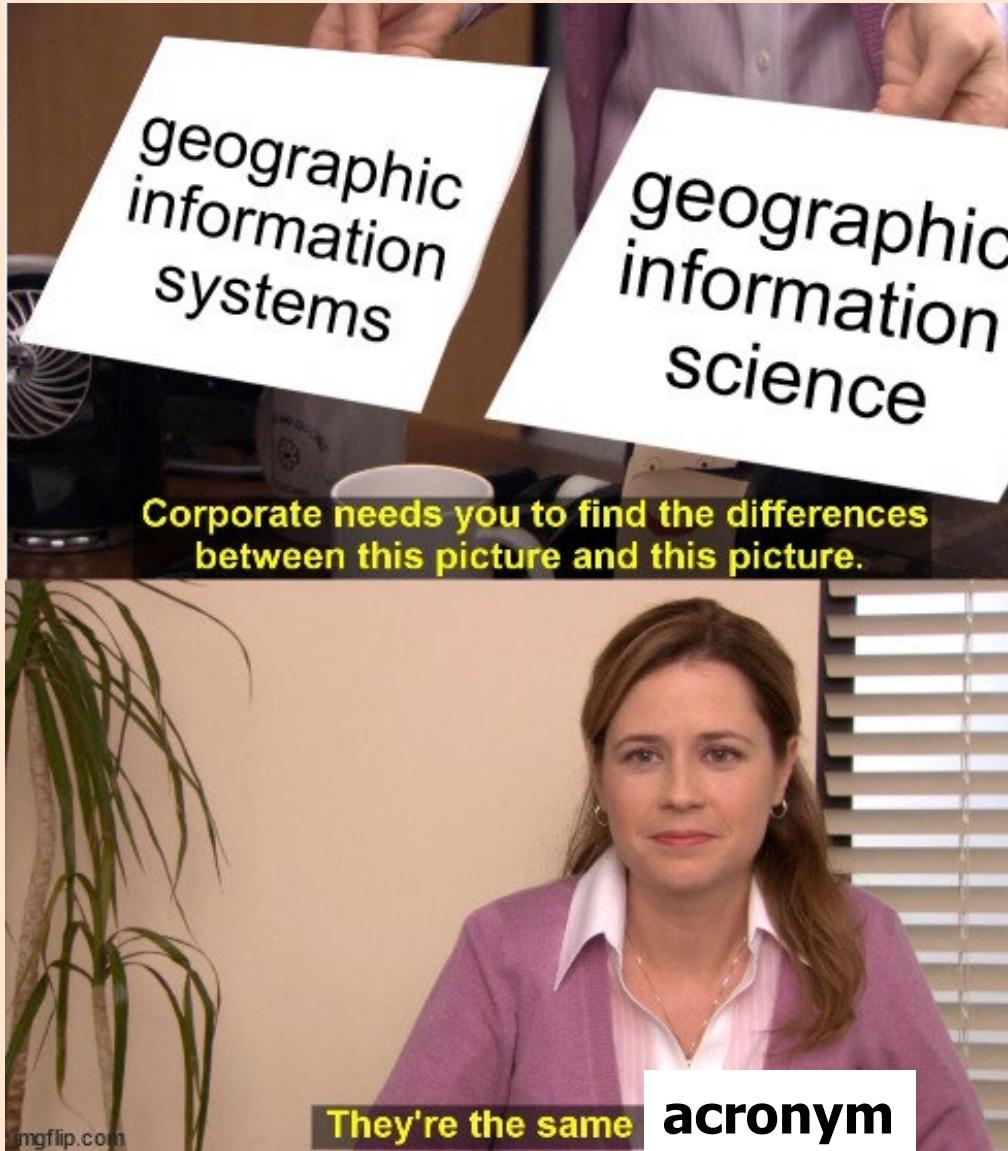
What is GIS?

A) Geographic Information Systems

or

B) Geographic Information Science

What is GIS?



What is GIS?

GISystems

=



Spatial tools

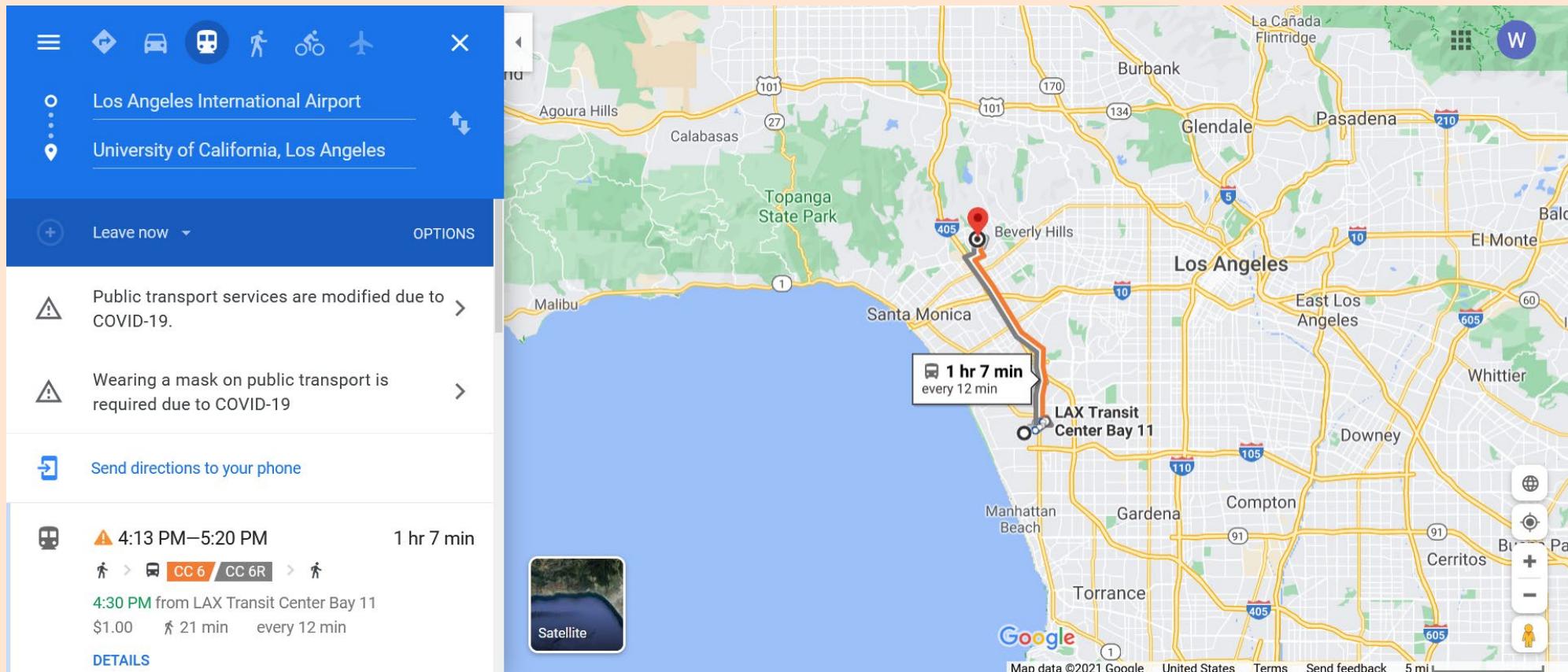
GIScience

=



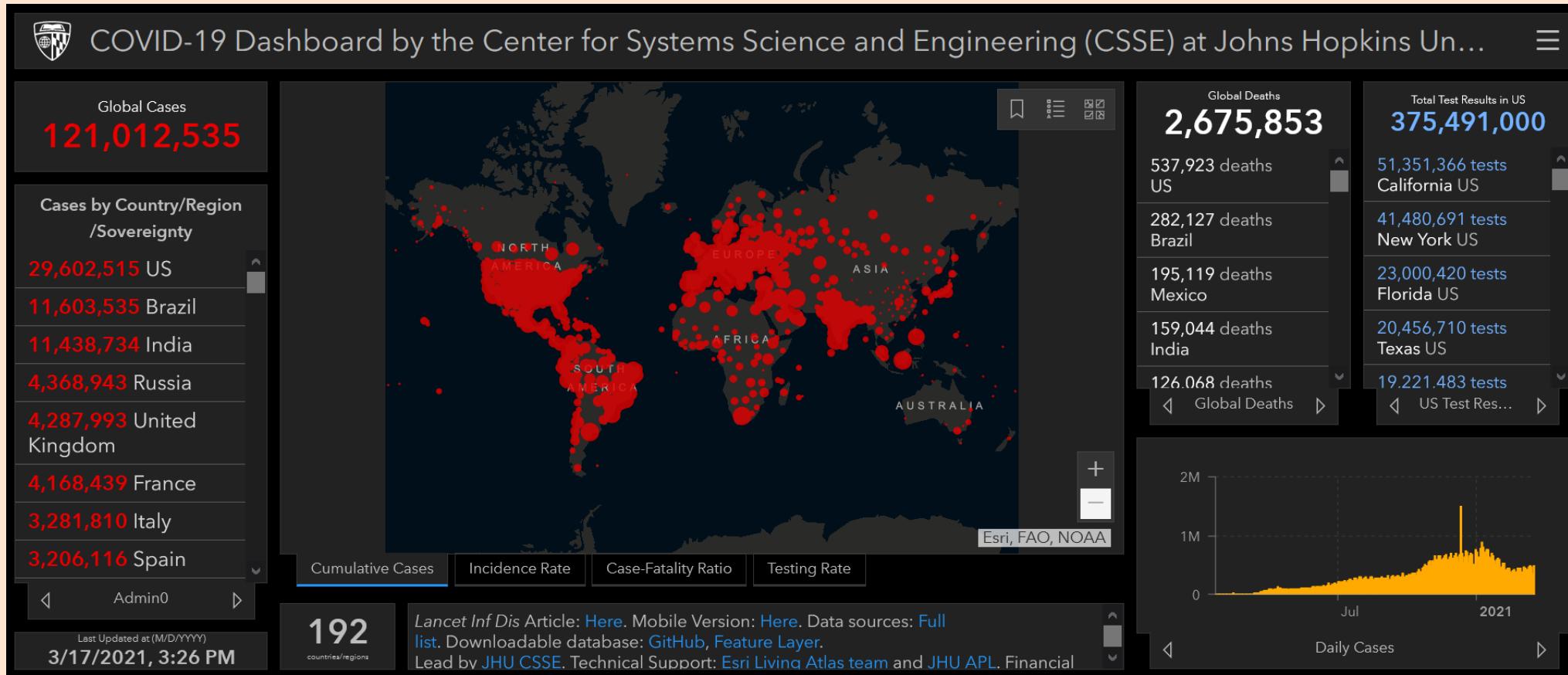
Spatial thinking

Examples of GIS



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

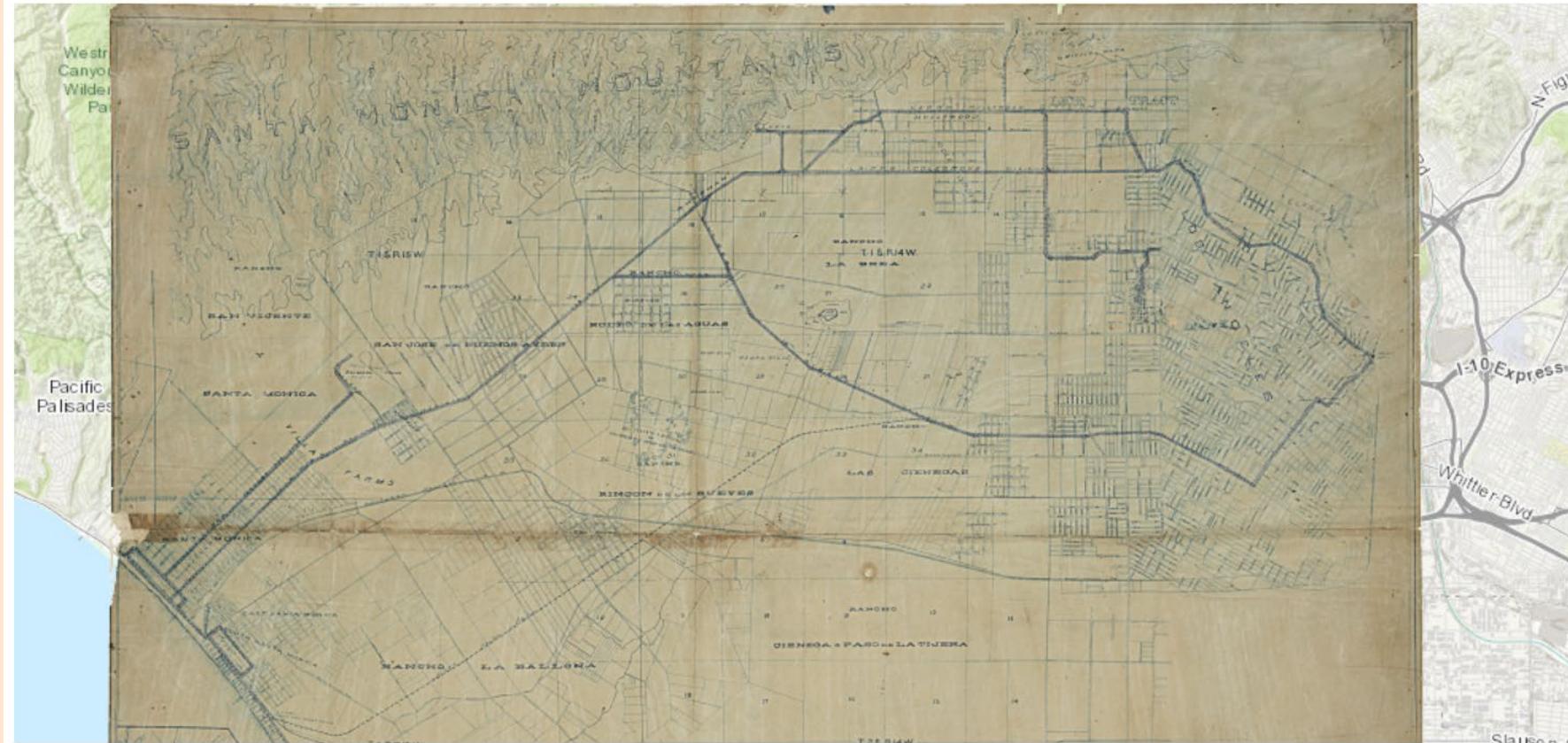
Examples of GIS



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

Are historical maps GIS?

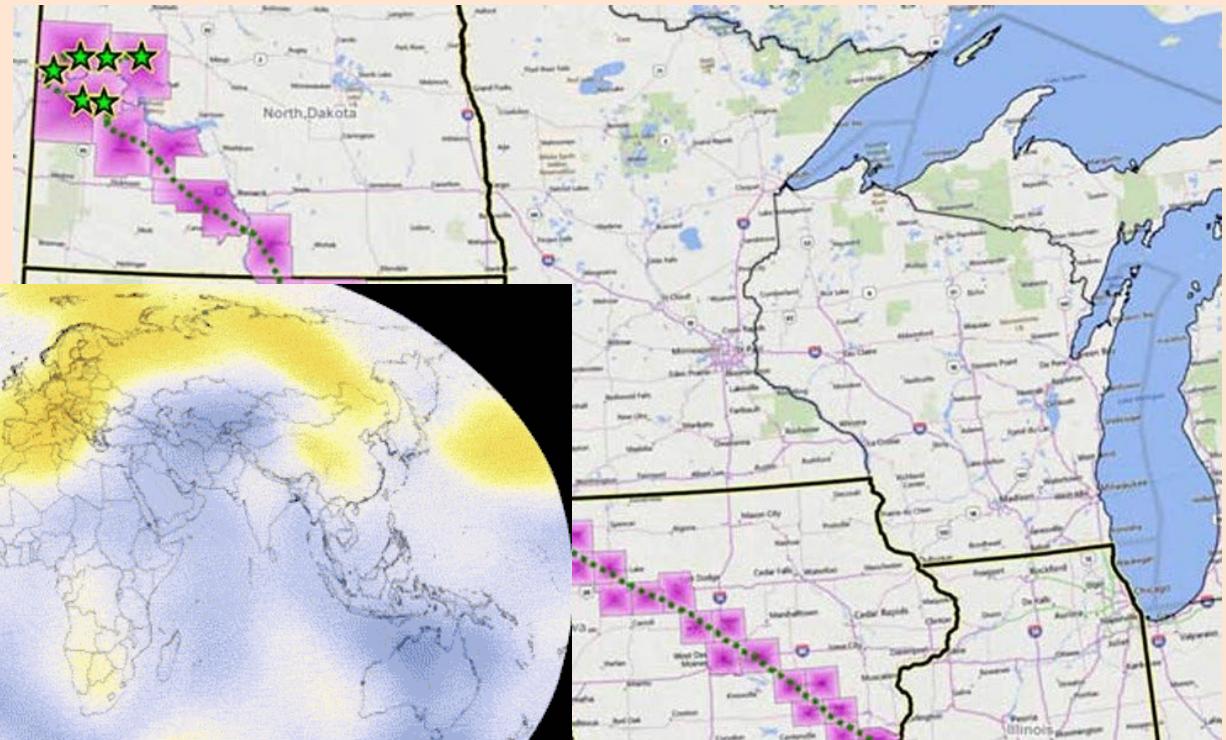
Map of the Los Angeles-Pacific R.R.



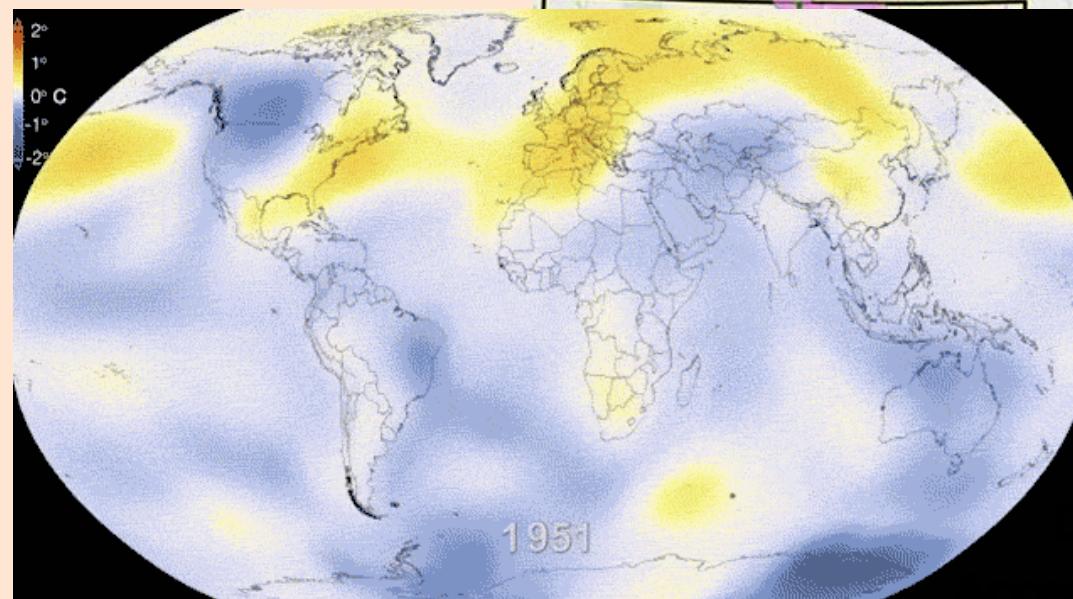
HyperCities Map Library, <http://www.hypercities.com/maplibrary/index.html>

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

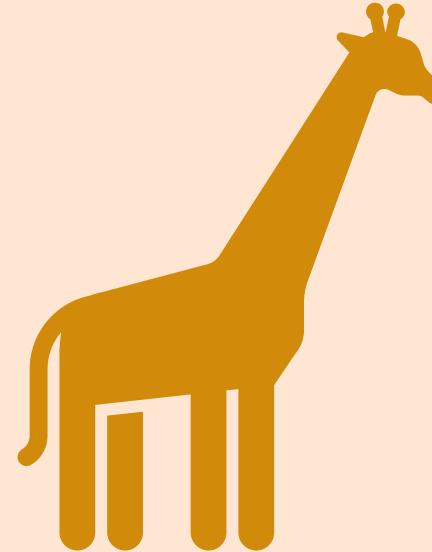
Participatory GIS/Community-Based GIS



Data



Data



Qualitative

- Color
- Animal species

Quantitative

- Height
- # of legs

Applying our 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

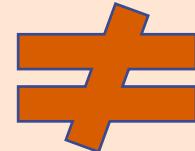
Rational

Neutral

Technocratic

Objective

Non-ideological



Voices of community

Power relations

Power Inequalities

Alternative data forms:

The screenshot shows the 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

OpenStreetMap Edit History Export

Search Where is this? Go

Community & Organization Partner with Us Get Involved

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

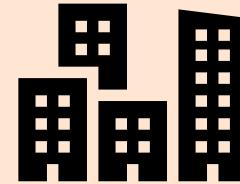
Enter location

BACK NEXT

2 Date of Harassment

Alternative data forms:

More Community based



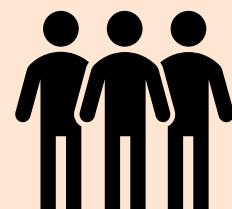
Open Data



Humanitarian



Crowdsource



Participatory



**Our
Focus**

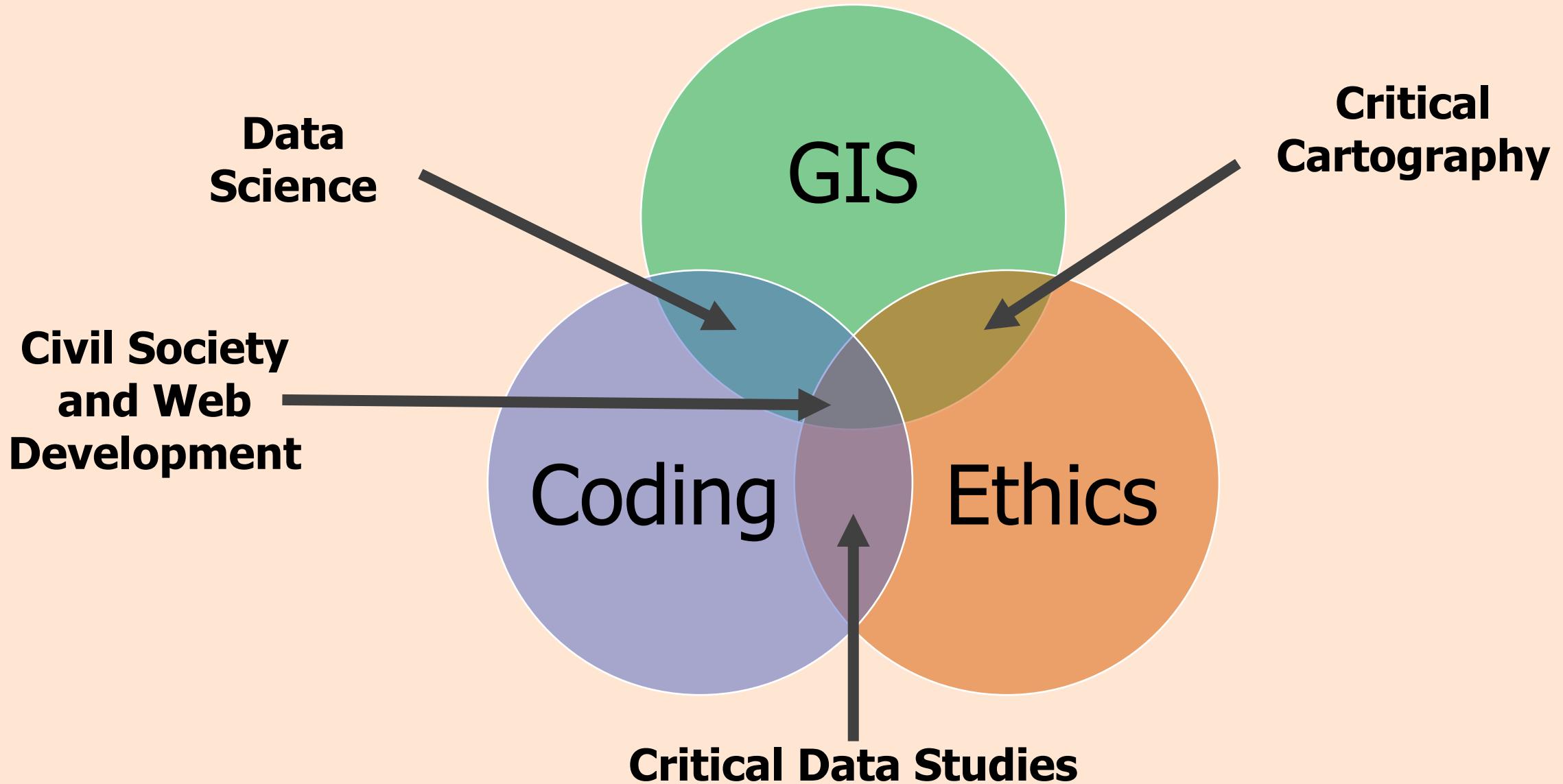
Ethics

Ethics

- 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?**

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



Distracting



Unsure, keep trying it



Useful



Very engaging



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