



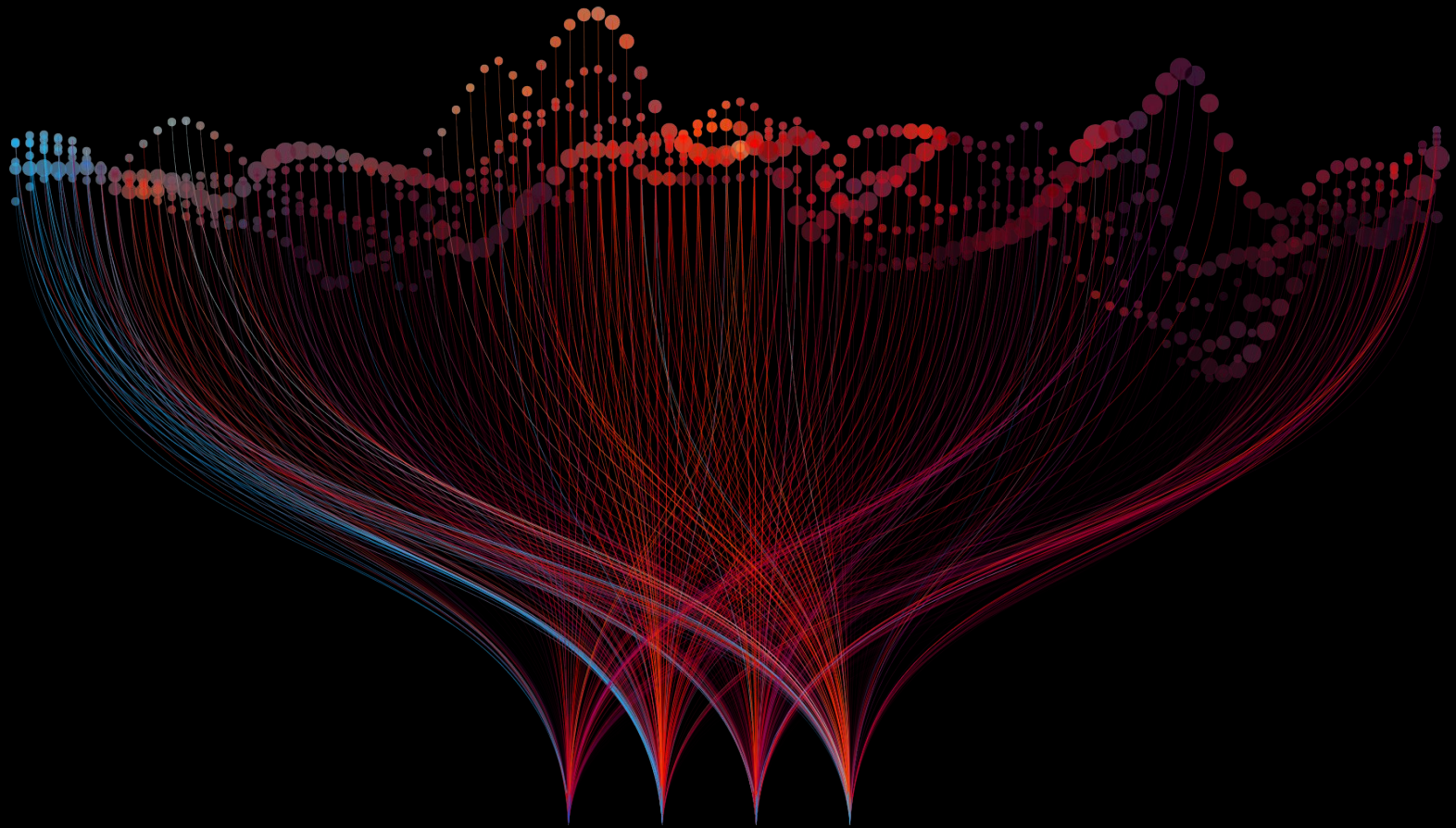
## Project 3: Visualizing Data

Data Boot Camp  
Lesson 18.1



# Your Task

# Tell a Story with Data





# What?



# Project Week Overview

# Project Week! (This Week)

---

## Day 1:



Form groups (3–5 people each)



Outline project ideas



Initial data exploration



“Sketch” ideal visuals



Create project proposal

## Day 2:

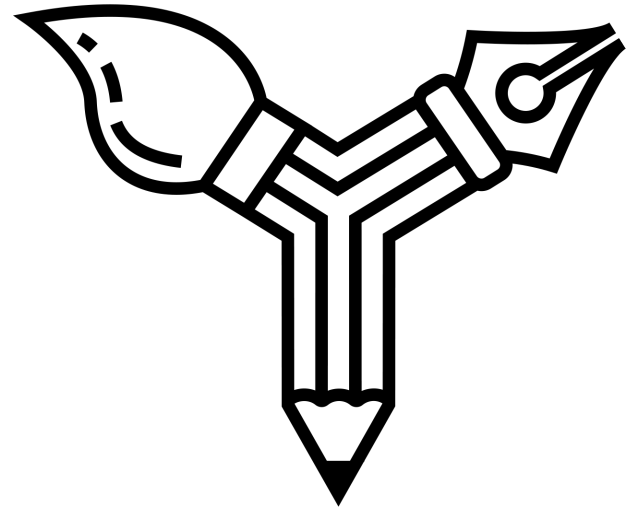


Hardcore development

## Day 3:



Hardcore development



# Project Week! (Next Week)

---

## Day 4:



Hardcore development



Build visualization showcase

## Day 5:



Final touches

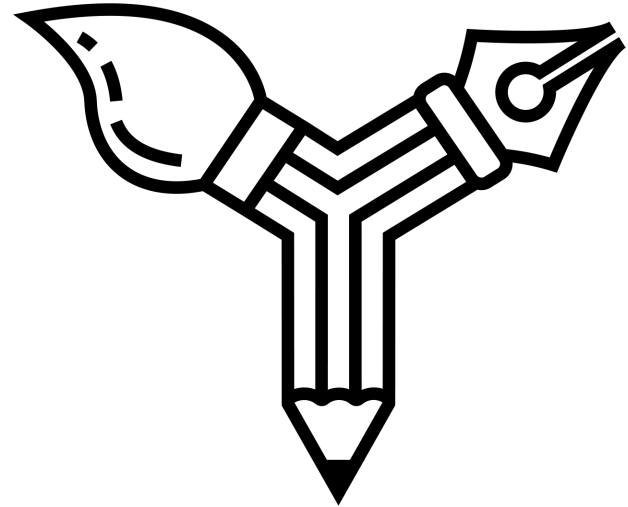


Prepare presentation

## Day 6:



Present project slides



# Project Requirements



# Project Description

---

01

Your task is to **tell a story** using data visualizations.

02

Focus on providing users an **interactive means** to explore data themselves.

03

Prepare a **10-minute presentation** that lays out your theme, coding approach, data munging techniques, and final visualization.

04

You may choose a project of any theme, but we encourage you to **think broadly**.

05

You will have **ample time in class** to work with your group, but expect to put in **hours outside of class** as well.

# Specific Requirements

---

1. Your visualization must include a Python Flask–powered API, HTML/CSS, JavaScript, and at least one database (SQL, MongoDB, SQLite, etc.).
2. Your project should fall into one of the below three tracks:
  - A combination of web scraping and Leaflet or Plotly
  - A dashboard page with multiple charts that update from the same data
  - A server that performs multiple manipulations on data in a database prior to visualization (**must be approved**)
3. Your project should include at least one JS library that we did not cover.
4. Your project must be powered by a dataset with at least 100 records.
5. Your project must include some level of user-driven interaction (e.g., menus, dropdowns, textboxes).
6. Your final visualization should ideally include at least three views.

# Rubric

# Rubric at a Glance

---

## Categories for grading



Data and data delivery (20 points)



Back end: ETL (20 points)



Visualizations (20 points)



Group presentation (20 points)



Slide deck (20 points)

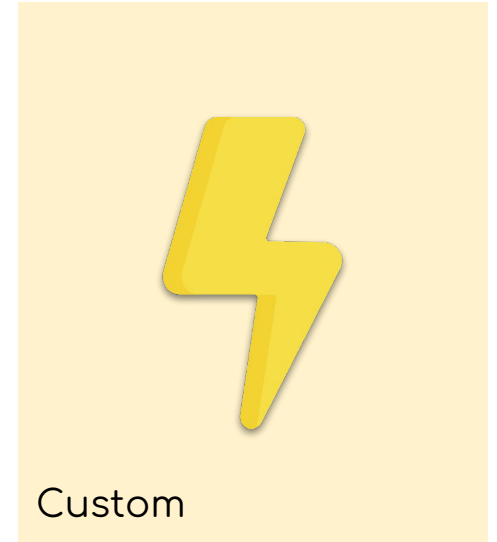
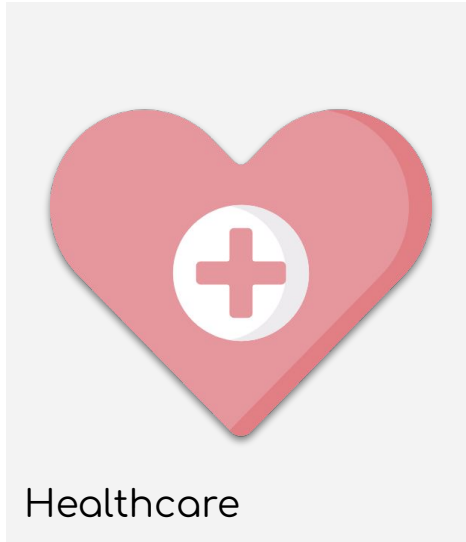
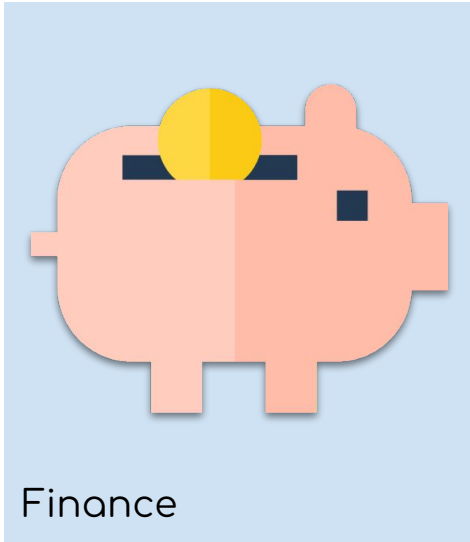
# Choosing a Project Track

# Choosing a Project Track

---

This project gives you the ability to focus your efforts within a specific industry.

Here are the specializations:





# Dashboard Example: Finance

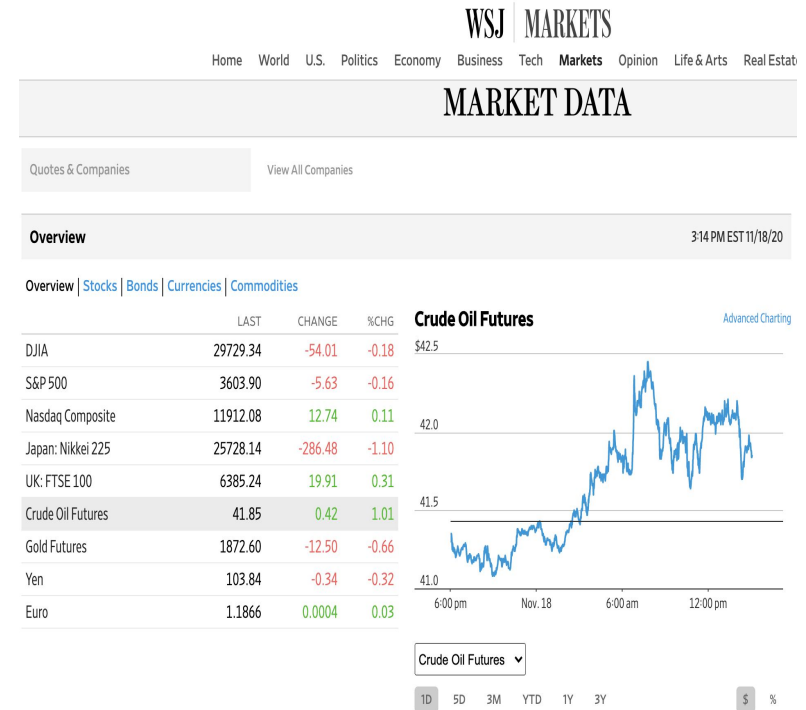


Tracking market data is crucial for equity traders. Not all traders code and are able to create custom-tailored visualizations. What's the best way for them to get what they need for success?

One option is offered by the [Wall Street Journal](https://www.wsj.com). Their website offers a dashboarding tool providing a high-level view of market performance.

This highly interactive tool allows users to easily explore stocks, bonds, currencies, and commodities.

- Users of all skill levels can utilize these data.
- Visualizations help make the data easier to understand.
- Multiple views are available for customized content.



# Dashboard Example: Healthcare



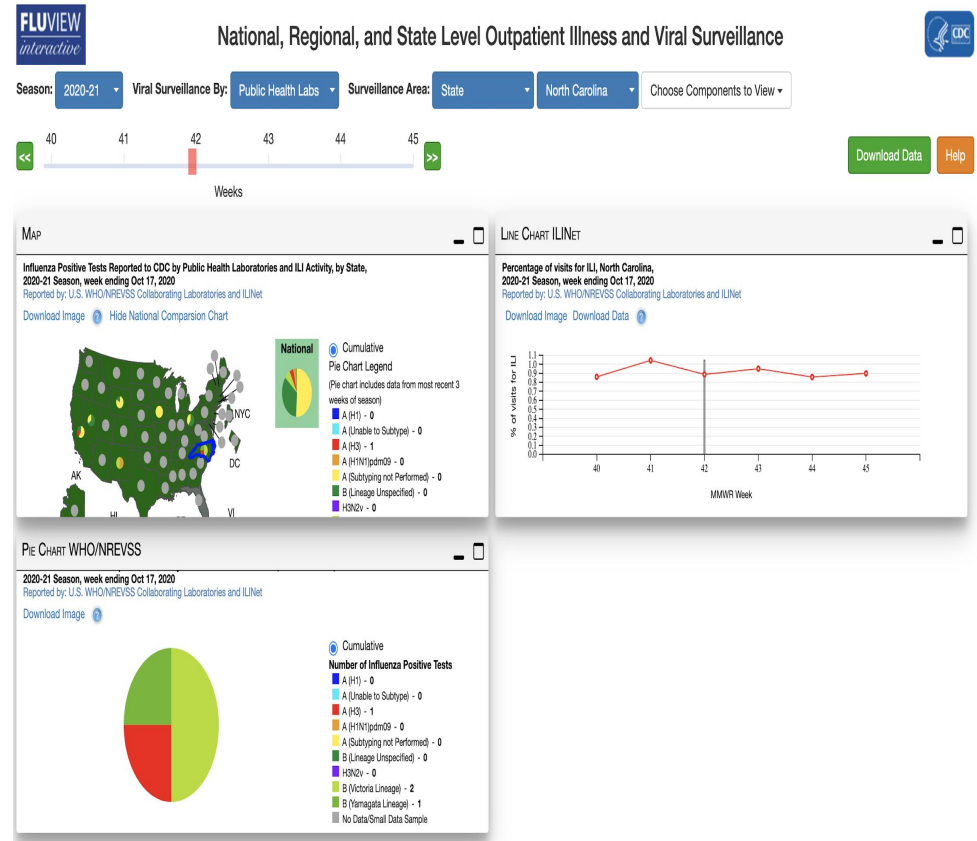
Imagine: Vacation time is coming up—and so is flu season. Trying to plan a road trip across the United States while keeping everyone's health in mind can be tricky.

Using the [FluView](https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html) dashboard provided by the CDC, users can easily confirm which areas to avoid.

Different interactive features include:

- An overall view of the United States, or customizable view (state by state)
- Historic and current cases
- A chart showing the count of cases, broken down by strain

With this, data are delivered quickly and navigated through with ease.



# Dashboard Example: Weather Tracking



While on the way to work one morning, you notice dark clouds on the horizon. You don't remember hearing about a storm front coming in, but this looks ominous.

A quick visit to [Weather Underground's Dashboard](#) helps illuminate the situation.

Updated with live data, you can view a live map as well as specific conditions such as temperature, pressure, and even feed from a live webcam.

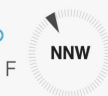
The data delivery is up-to-date and seamless, making it easy to understand current conditions without digging too deeply.

## Station Summary

● Online(updated 11 seconds ago)

### CURRENT CONDITIONS

29.0 °



WIND & GUST  
8.9 / 19.6 mph

Feels Like 20.6 °

DEWPOINT  
26.7 ° F

PRECIP RATE  
0.01 in/hr

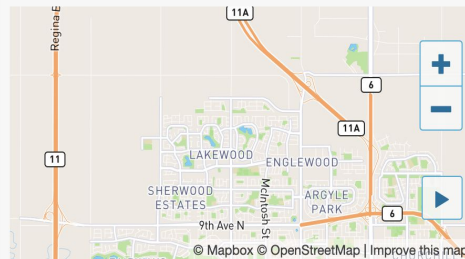
PRESSURE  
29.69 in

HUMIDITY  
91 %

PRECIP ACCUM  
0.11 in

UV  
0

### MAP



[View WunderMap](#)

## PWS CURRENT CONDITIONS

### TEMPERATURE



DEWPOINT  
26.7 °F  
HUMIDITY  
91 %

### WIND



WIND  
FROM  
NNW  
GUST  
19.6 mph

### PRESSURE



CURRENT  
29.69 in

# Final Thoughts

---

01

Project week is a great time to tie up loose ends, both with your group and on your own.

02

If there are topics you'd like to review, shoot me and the TAs a message. We're happy to do (recorded) extra review sessions for small groups during these weeks.

03

Good luck and have fun!

# Time to divide into teams!





Questions?