

Pitch for our project: [US data Sets]

What is the big picture(the story we are telling)?

Question: What are the key factors influencing vaccine preference (Moderna vs. Pfizer or others) among different demographic groups, and how does this impact vaccination rates in the US?

This question allows us to delve into the preferences for different COVID-19 vaccines and understand whether factors like age, ethnicity, political views, or cultural beliefs influence the choice of vaccine. Additionally, we can explore how these preferences correlate with vaccination rates within various demographic groups.

Questions we are hoping to get answered: [Is this the story we are going to tell?]

Question1 .Herd immunity. In theory, 70% is herd immunity so we will use the data to see if it is true

Question 2. Was the COVID-19 vaccination distributed evenly? i.e.) distributed to all ethnicity and socioeconomic statuses (ratio between republican and democrats and how that correlated to vaccination rates)

Question 3. Preference of vaccinations due to political (US elections will show political distributions) and cultural views?

COVID visualisation ideas [Visualisation to prove our point ?]

1. Vaccine preference (Moderna vs Pfizer or others)
2. Number of boosters?
3. Ethnicity ← we can get this from census too
4. Socioeconomic <- we might need census data on income of US
5. Geographic location
6. Sex/Age
7. Accessibility to healthcare ← this might be from another data set as well
8. Those vaccinated compared to total population
9. Optional: Deaths vs Vaccinated and Deaths vs Unvaccinated

OR [More Detailed Explanation of what is mentioned above]

- **Demographic Distribution of Vaccine Preferences:** Create bar charts or stacked bar charts showing the distribution of vaccine preferences (Moderna, Pfizer, others) among different demographic groups (age, ethnicity, political affiliation, cultural background). This will help identify any trends or preferences within these groups.
- **Vaccine Preference Over Time (this one will need over time data):** Create a time series plot to show how vaccine preferences have evolved over time, particularly in relation to significant political events like the US elections. This can help assess the impact of political events on vaccine choice.
- **Geographic Variations in Vaccine Preference:** Use maps or geographical visualisations to display regional variations in vaccine preferences. Explore whether certain vaccines are more popular in specific geographic areas.

- **Vaccination Rates by Preference:** Calculate and visualise vaccination rates for each vaccine choice within different demographic groups. This will help determine whether there are disparities in vaccination rates based on vaccine preference.
- **Correlation Analysis:** Perform correlation analysis to identify any significant relationships between vaccine preferences and factors like political affiliation, cultural views, or accessibility to healthcare.
- **Optional: Deaths vs. Vaccinated and Unvaccinated:** If you have access to data on COVID-19 cases and deaths, you can explore whether there is any correlation between vaccine preference and COVID-19 outcomes (e.g., comparing deaths among the vaccinated and unvaccinated).

Any statistical Analysis?

- correlate with vaccination rates within various demographic groups.

(These datasets are available as .csv or .json() and are all from the CDC)

Provisional COVID-19 Deaths by Sex and Age [Data Set 1] [To compare with the vaccinated one's]

Notes :pull both datasets so that you can compare

- <https://data.cdc.gov/Public-Health-Surveillance/Rates-of-COVID-19-Cases-or-Deaths-by-Age-Group-and/3rge-nu2a>

DATA SET FOR VACCINATION LOCATIONS [Data set 2] - This will give geographical information

https://data.cdc.gov/Vaccinations/Vaccines-gov-COVID-19-vaccinating-provider-location/5jp2-pgaw/explore/query/SELECT%0A%20%20%60provider_location_guid%60%2C%0A%20%20%60loc_store_no%60%2C%0A%20%20%60loc_phone%60%2C%0A%20%20%60loc_name%60%2C%0A%20%20%60loc_admin_street1%60%2C%0A%20%20%60loc_admin_street2%60%2C%0A%20%20%60loc_admin_city%60%2C%0A%20%20%60loc_admin_state%60%2C%0A%20%20%60loc_admin_zip%60%2C%0A%20%20%60sunday_hours%60%2C%0A%20%20%60monday_hours%60%2C%0A%20%20%60tuesday_hours%60%2C%0A%20%20%60wednesday_hours%60%2C%0A%20%20%60thursday_hours%60%2C%0A%20%20%60friday_hours%60%2C%0A%20%20%60saturday_hours%60%2C%0A%20%20%60web_address%60%2C%0A%20%20%60pre_screen%60%2C%0A%20%20%60insurance_accepted%60%2C%0A%20%20%60walkins_accepted%60%2C%0A%20%20%60provider_notes%60%2C%0A%20%20%60ndc%60%2C%0A%20%20%60med_name%60%2C%0A%20%20%60in_stock%60%2C%0A%20%20%60supply_level%60%2C%0A%20%20%60quantity_last_updated%60%2C%0A%20%20%60latitude%60%2C%0A%20%20%60longitude%60%2C%0A%20%20%60category%60%2C%0A%20%20%60unnamed_column%60%2C%0A%20%20%60offers_free_masks%60%2C%0A%20%20%60min_age_months%60%2C%0A%20%20%60min_age_years%60/page/filter

- Can map to see where people get vaccinations

COVID-19 Case Surveillance Public Use Data with Geography [Data Set 3]

https://data.cdc.gov/Case-Surveillance/COVID-19-Case-Surveillance-Public-Use-Data-with-Geography/explore/query/SELECT%0A%20%20%60case_month%60%2C%0A%20%20%60res_state%60%2C%0A%20%20%60state_fips_code%60%2C%0A%20%20%60res_county%60%2C%0A%20%20%60county_fips_code%60%2C%0A%20%20%60age_group%60%2C%0A%20%20%60sex%60%2C%0A%20%20%60race%60%2C%0A%20%20%60ethnicity%60%2C%0A%20%20%60case_positive_specimen%60%2C%0A%20%20%60case_onset_interval%60%2C%0A%20%20%60process%60%2C%0A%20%20%60exposure_yn%60%2C%0A%20%20%60current_status%60%2C%0A%20%20%60symptom_status%60%2C%0A%20%20%60hosp_yn%60%2C%0A%20%20%60icu_yn%60%2C%0A%20%20%60death_yn%60%2C%0A%20%20%60underlying_conditions_yn%60%2C%0A%20%20%60page/filter

COVID-19 Vaccination Age and Sex Trends in the United States, National and Jurisdictional [Data Set 4]

https://data.cdc.gov/Vaccinations/COVID-19-Vaccination-Age-and-Sex-Trends-in-the-United-States/explore/query/SELECT%0A%20%20%60date%60%2C%0A%20%20%60location%60%2C%0A%20%20%60demographic_category%60%2C%0A%20%20%60census%60%2C%0A%20%20%60administered_dose1%60%2C%0A%20%20%60series_complete_yes%60%2C%0A%20%20%60booster_doses%60%2C%0A%20%20%60second_booster%60%2C%0A%20%20%60administered_dose1_pct_agegroup%60%2C%0A%20%20%60series_complete_pop_pct_agegroup%60%2C%0A%20%20%60booster_doses_vax_pct_agegroup%60%2C%0A%20%20%60second_booster_vax_pct_agegroup%60%2C%0A%20%20%60page/filter

Just remember to take note of the limitations of our dataset during writeup and presentation

*****export powerpoints and documents to PDF*****