

# Studying the Healthcare, Social and Economic Impacts of COVID-19 in California

**Team Members:** Daniel Chow, Vishakh Pillai, Sandip Panesar

## GitHub Repository:

[https://github.prod.oc.2u.com/UCB-INFO-PYTHON/Project2\\_Chow\\_Pillai\\_Panesar](https://github.prod.oc.2u.com/UCB-INFO-PYTHON/Project2_Chow_Pillai_Panesar)

## Primary Dataset:

We will be using the California COVID-19 Cases dataset from the California Department of Public Health Open Data Portal. This is a daily-updated ledger of confirmed COVID-19 cases in 60 California counties, since March 2020. This consists of the statewide cases and hospital-by-county datasets. The cutoff date for datasets is 19th of July 2020 in order to ensure that our results are all consistent.

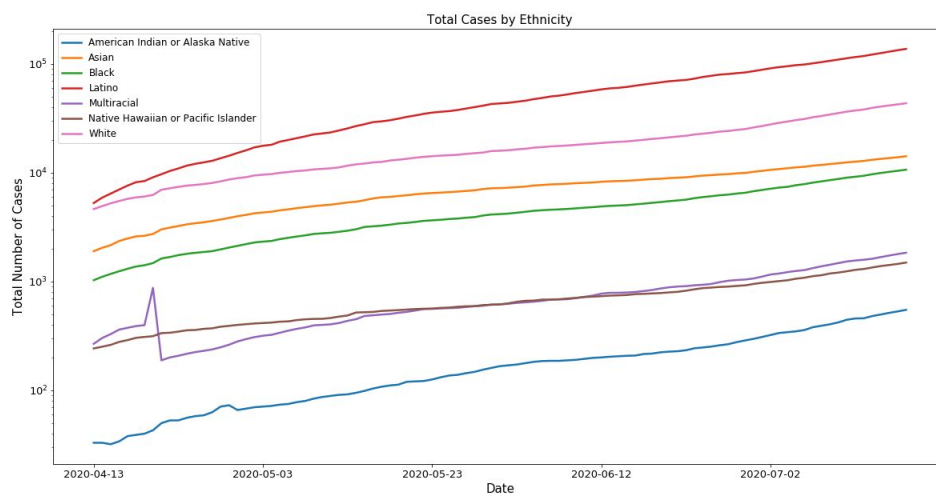
<https://data.ca.gov/organization/california-department-of-public-health>

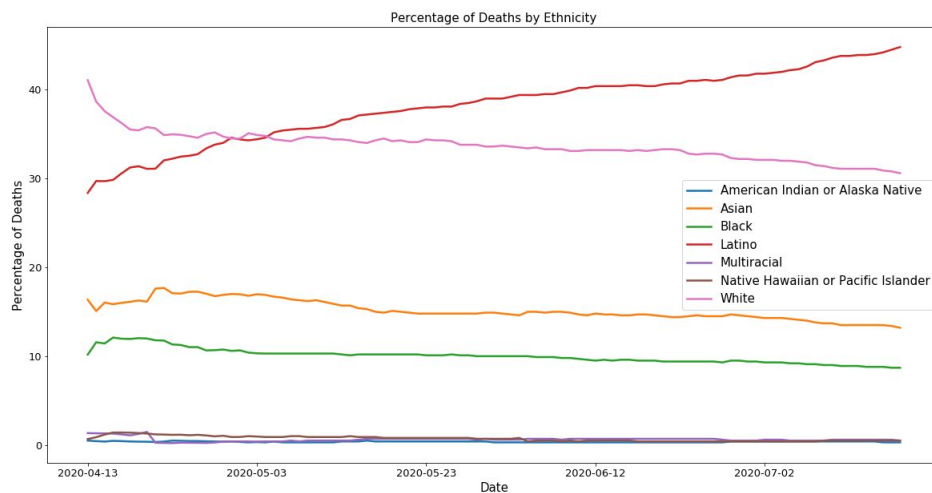
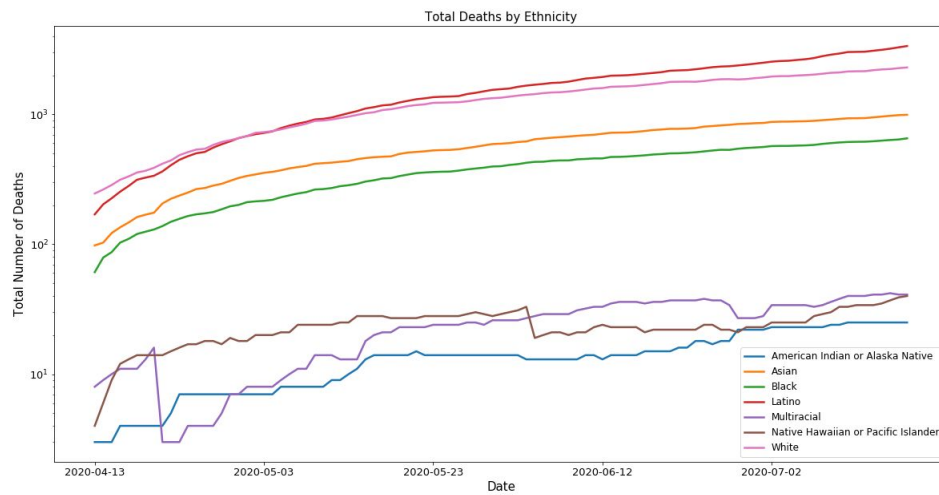
## Supplemental Datasets:

Smaller age, sex, ethnicity, homelessness and PPE datasets contained within the same website.

## Initial Plots, Figures, Tables:

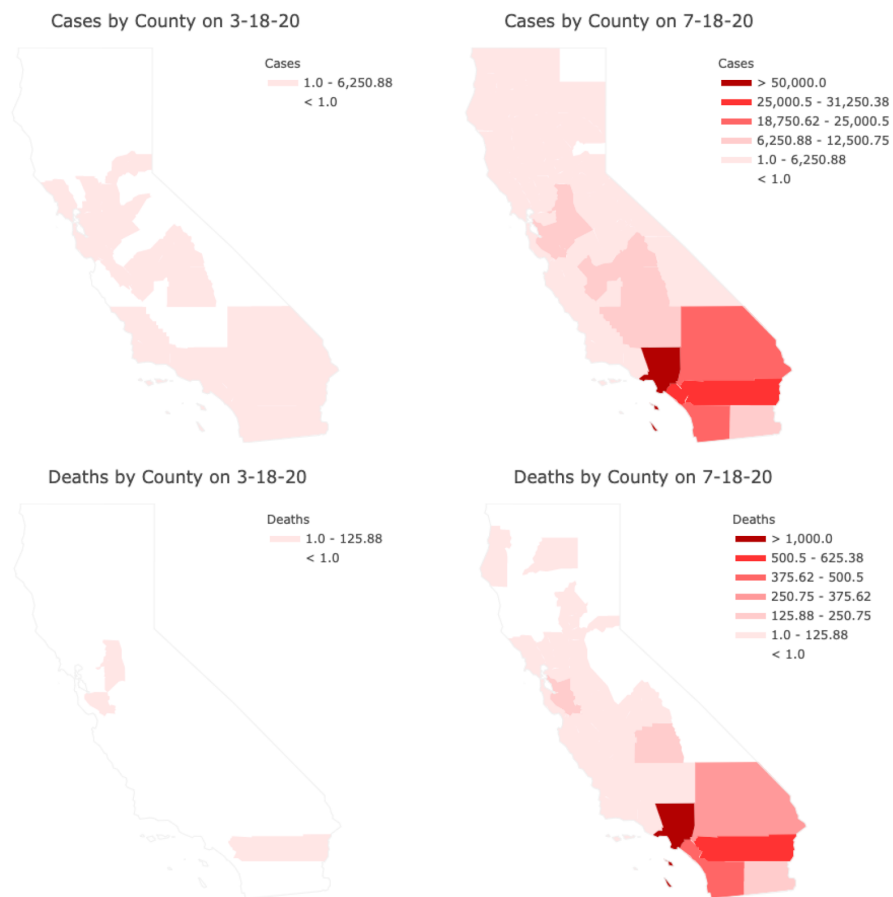
Our initial exploration of the dataset has demonstrated that different ethnicities are affected differently by the coronavirus in terms of total number of cases and mortality.



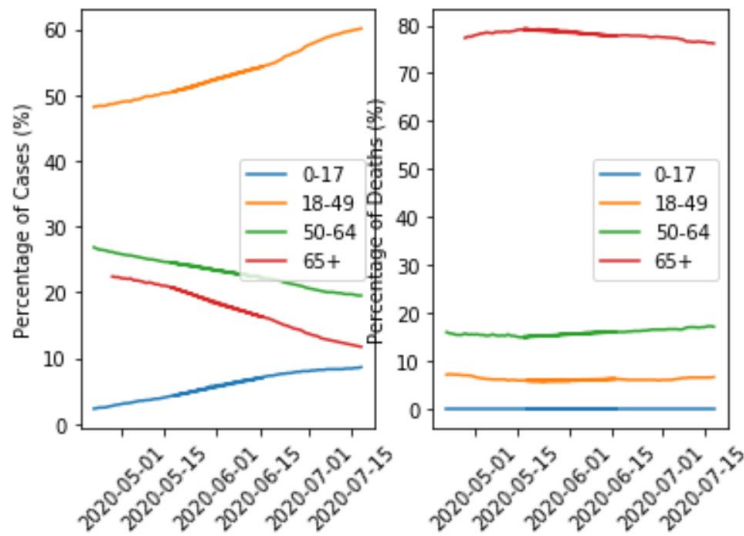
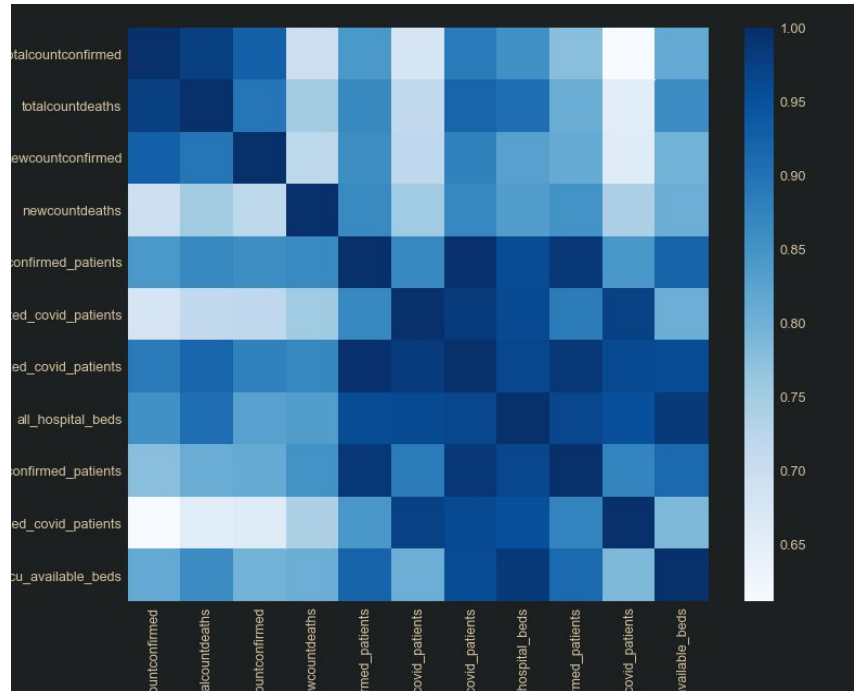


These charts show that there is clearly a difference between the rates of infection and death between the different ethnicities. It is worth exploring in more detail.

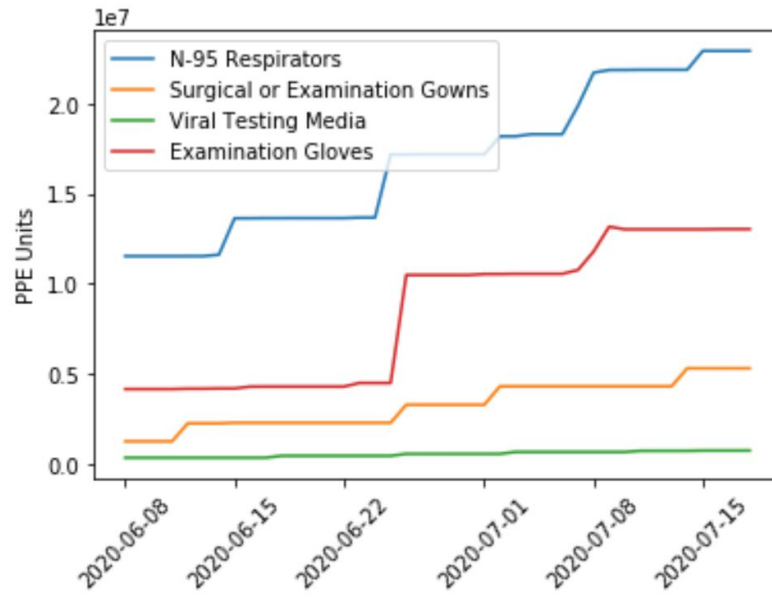
As the data permits it, we can also track geographical changes of COVID-19 cases in California over time:



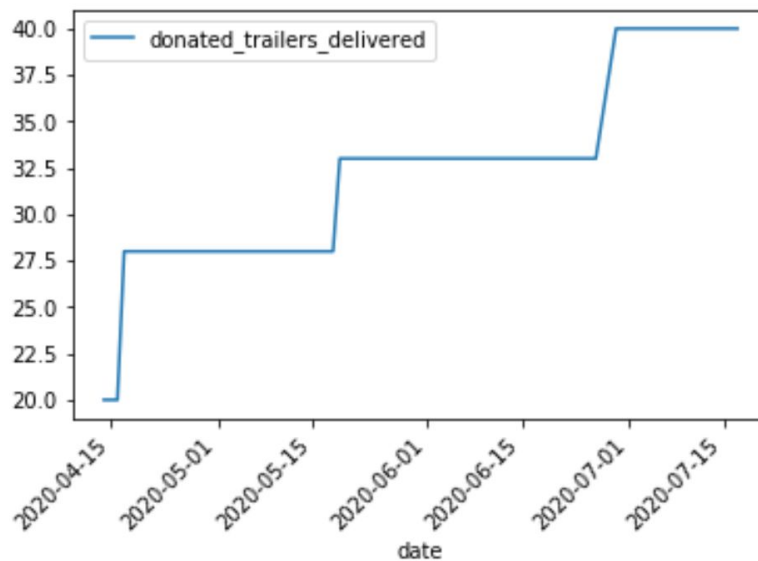
We also conducted a cursory correlation analysis of several different variables.



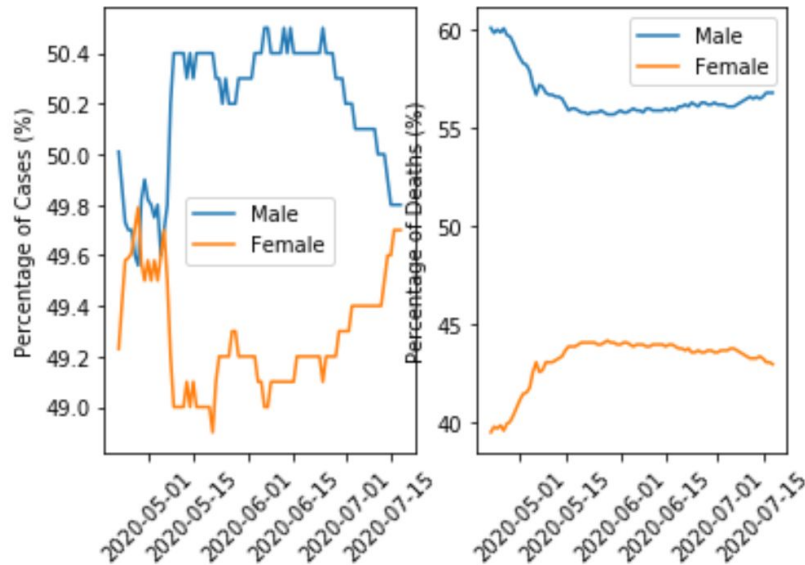
Younger populations have been contracting the virus more in the past two months while older populations have been contracting it much less. The death rates have not changed.



California has become more prepared from June to July in having more PPE units from N-95 masks to gloves to gowns.



California's homeless community has received double the amount of donated trailers delivered from April to July.



Men and women both contract COVID at a roughly equal rate, but men unfortunately are more likely to die. There's over a 20% difference. The difference reduced slightly since May but it is still considerable.

### Exploratory Variables:

#### Questions to be Answered:

1. How have different ethnicities been affected by the COVID-19? SP
2. Has the geographical epicenter of coronavirus cases shifted? SP
3. What is the PPE status of various counties and how has it changed? VP
4. How are different age groups affected by COVID-19? DC
5. What is the impact of COVID-19 on the homeless population? VP
6. How have the different sexes been affected by COVID-19? VP
7. How has hospital capacity changed since the beginning of the pandemic? DC

### Final Report:

For our final report, we will look at and present our analysis of the broad swath of data in the California COVID-19 database. We are specifically analyzing the effect of the coronavirus on the different ethnic, age, and socioeconomic groups across minor and major counties in California. Time permitting, we will compare and contrast our analysis to the US as a whole.