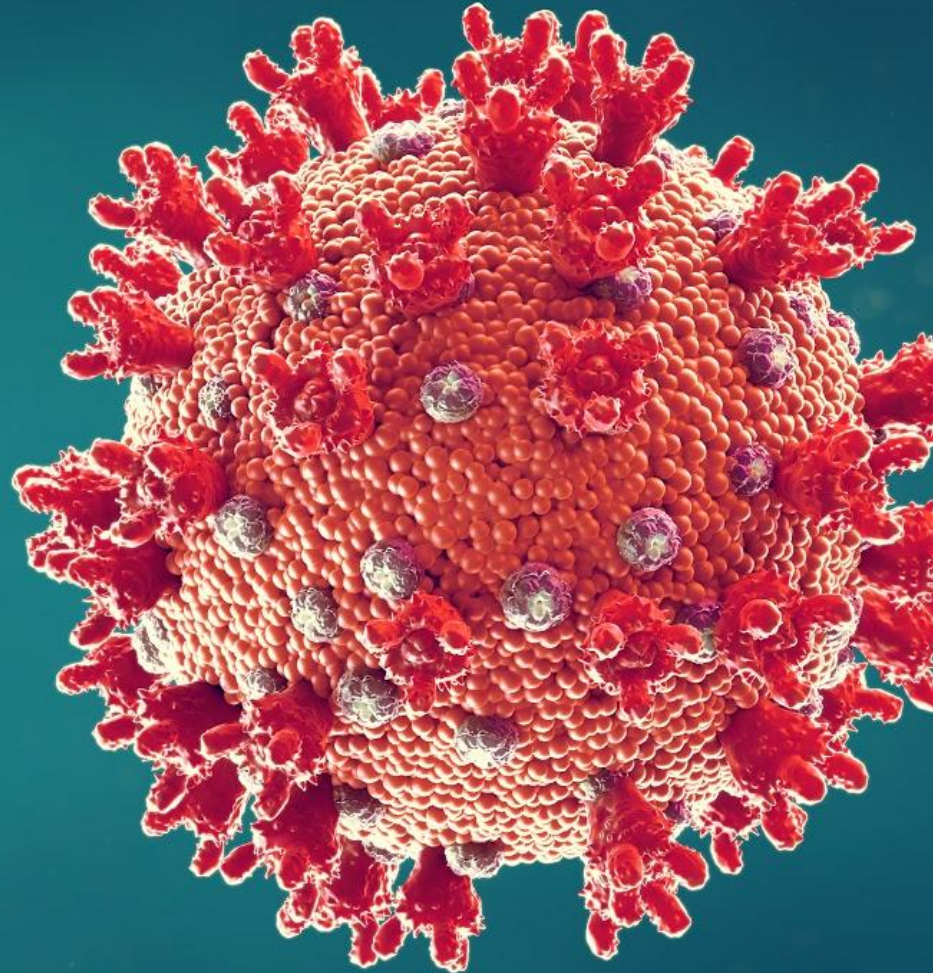


# UCSD Data Visualization

## Project 1 - COVID in Los Angeles

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# Study Summary

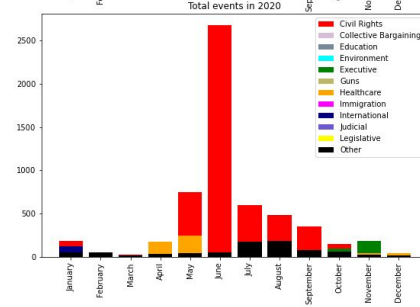
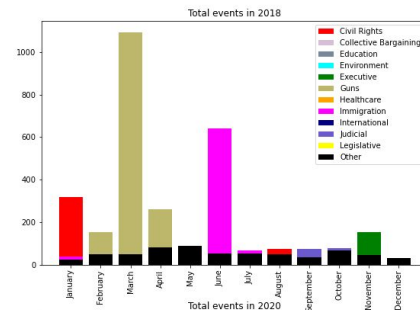
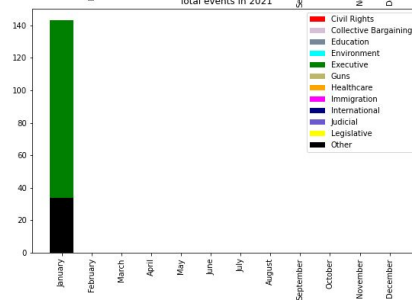
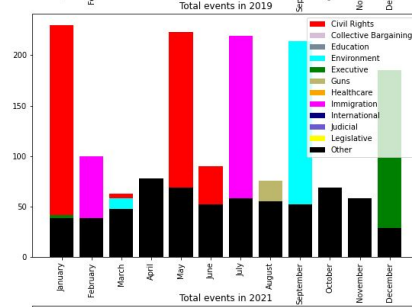
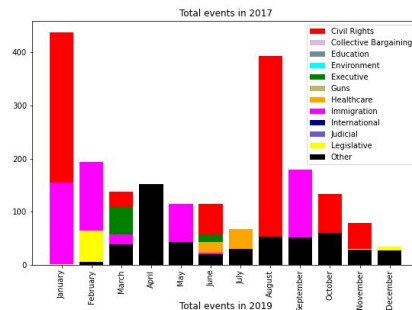
While we have been informed through media and other reports on how the U.S. has been affected by the novel Corona Virus, the team aims to validate the information by preparing data driven graphical representations and support our understanding and common beliefs on infection.

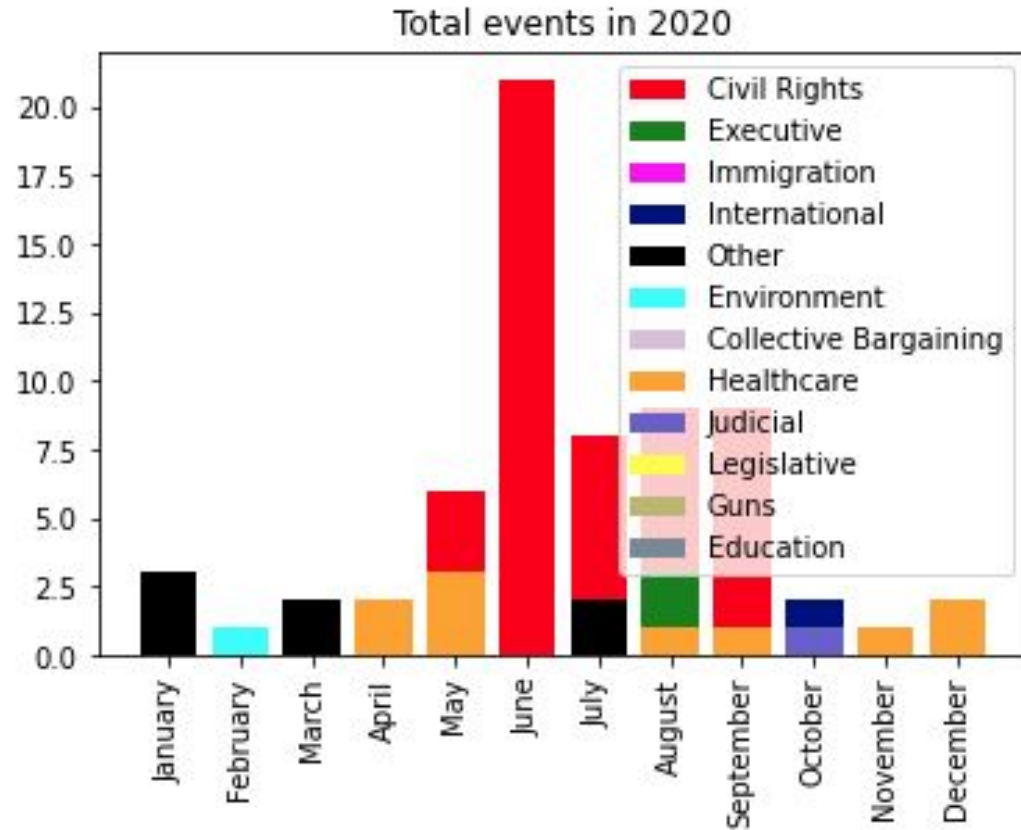
Our project utilizes data compiled from the LA Times, the EPA and other sources to calculate the COVID infection rates within the Los Angeles County. The team uses housing data, air quality, and mortality rates to confirm which factors were the most influential at raising the number of infected people.

**Through the analysis of a metropolitan area like Los Angeles, the team expected to demonstrate how major 21st century issues such as the environmental impact of pollution, socio-economic differences, and social unrest result in an increase in COVID cases and mortality.**



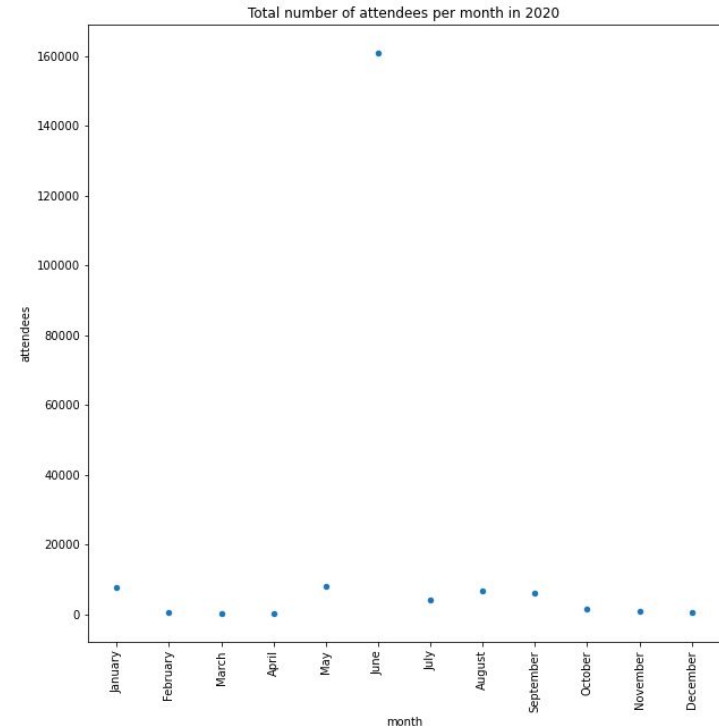
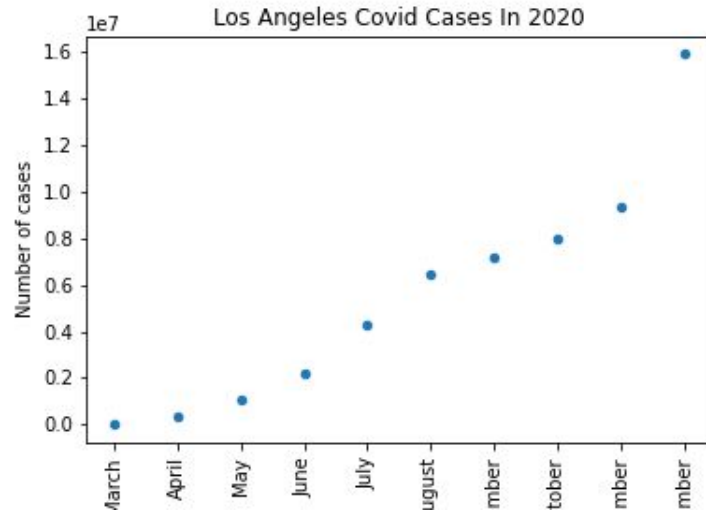
Unlike any other year,  
2020 registered the  
highest number of Civil  
Rights related protests in  
the country





Los Angeles Protests Data In 2020

**It appears like the civil rights protest in 2020 might have contributed slightly towards the spread of the virus in LA**





Question  
quality I

Hypothesis: Despite the quarantine mandate in California, transmission of COVID had a high impact in patients when pollution and dangerous air quality was more prevalent.



AQI Basics for Ozone and Particle Pollution			
Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

as the air

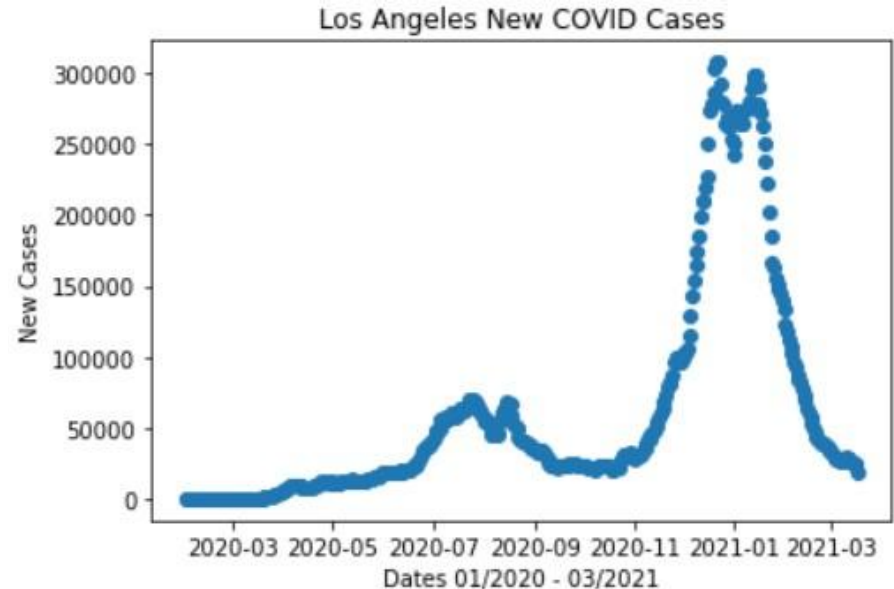
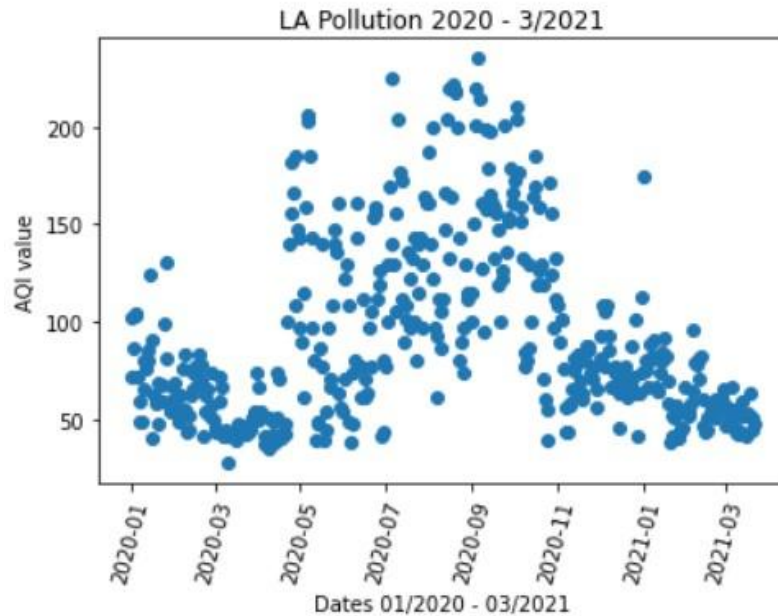


The COVID  
Tracking Project

AT *The Atlantic*

## What we observed:

While the highest spike in new COVID cases was definitely the 2020-21 holiday season, the months between July - September 2020 saw a higher number of new COVID cases, which correlated to the months in which pollution reached numbers higher than 150 AQI





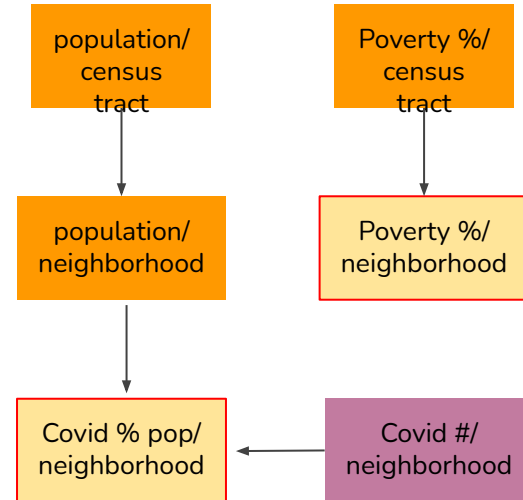
# Covid-19 and poverty in LA neighborhoods

- Geographical unit for Covid-19 infections is neighborhood. Data collected over a period of 367 days (03-16-2020 to 03-18-2021)
- Geographical unit for population and poverty is census tract (usually a few city blocks in size)

**Obtain detailed geographical and census data, correlate with Covid-19 infection numbers per neighborhood over 1 year.**

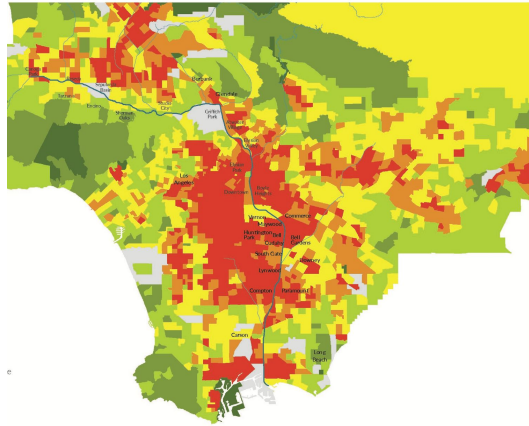
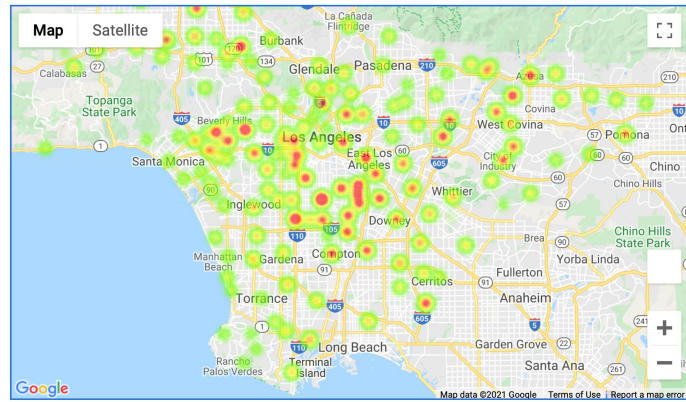
LA population: <https://usc.data.socrata.com/resource/y65w-5vdw.json>

Poverty in LA: <https://usc.data.socrata.com/resource/rresi-vihu.json>

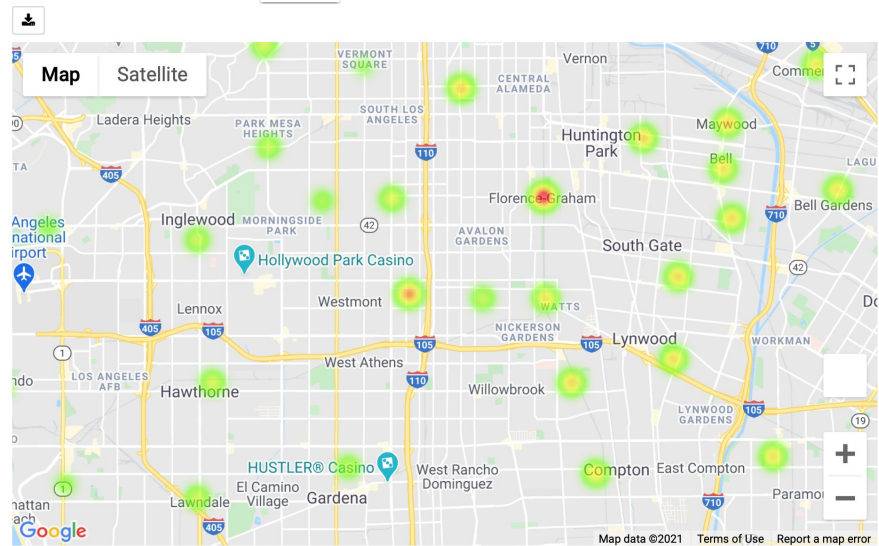




## Covid % of population in LA per neighborhood per day

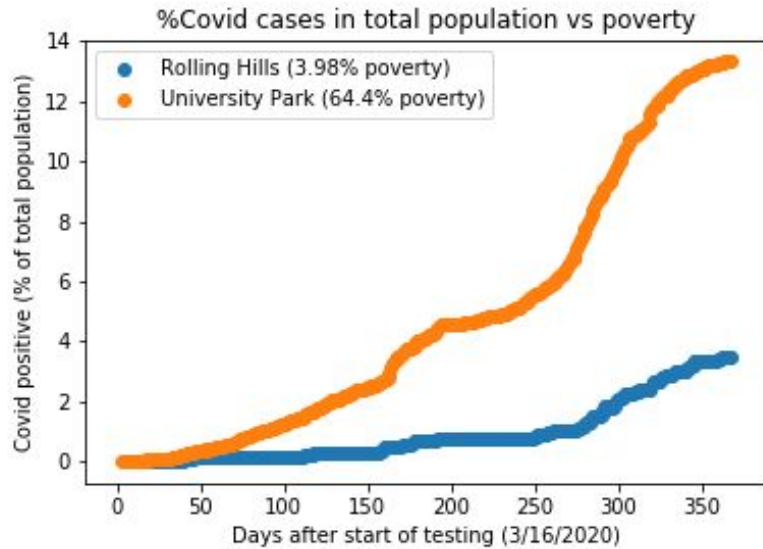


## Covid % of population in LA per neighborhood per day

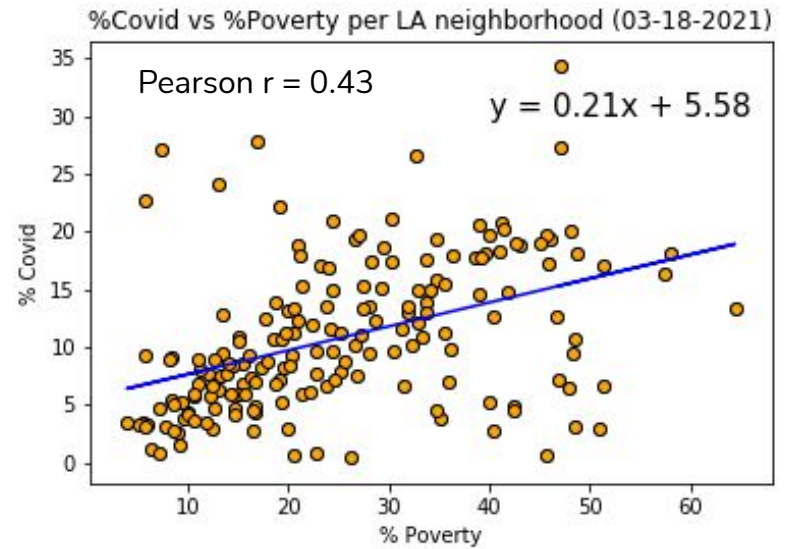


<http://riverlareports.riverla.org/public-health-and-social-equity/poverty/>

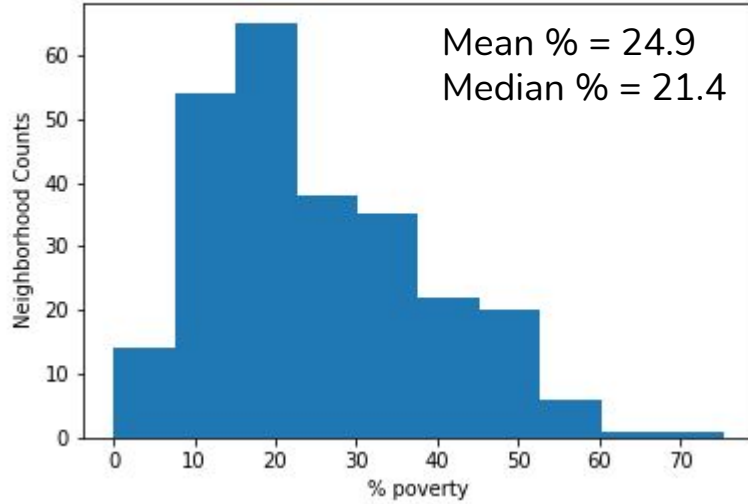
Lowest vs highest poverty over 1 year



All neighborhoods on the last day of data collection



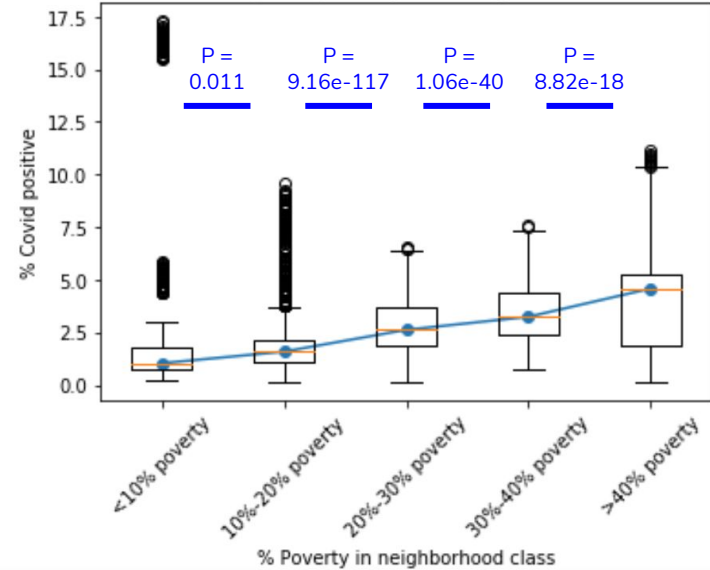
## Distribution of neighborhoods by % poverty



Google LA county poverty rate: 22.3%

## Covid-19 data aggregated over 50 days

% covid positive in lowest and highest poverty rate neighborhoods (10/02/2020 - 11-19-2020)



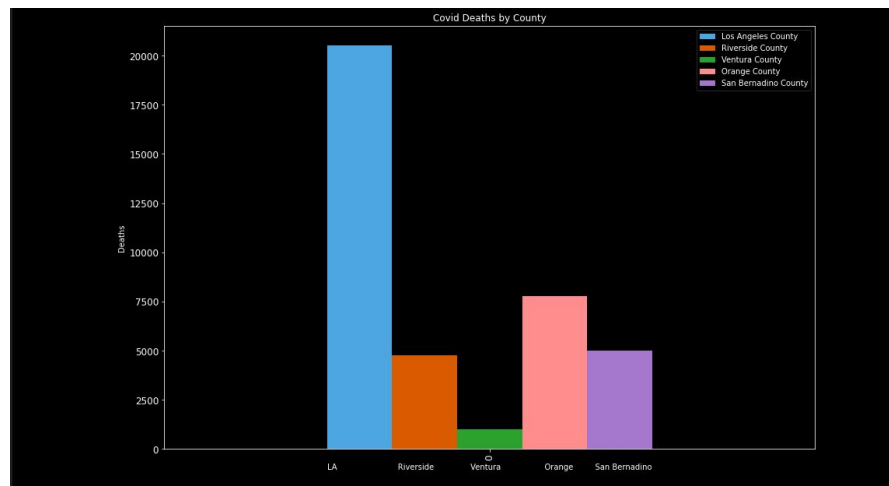
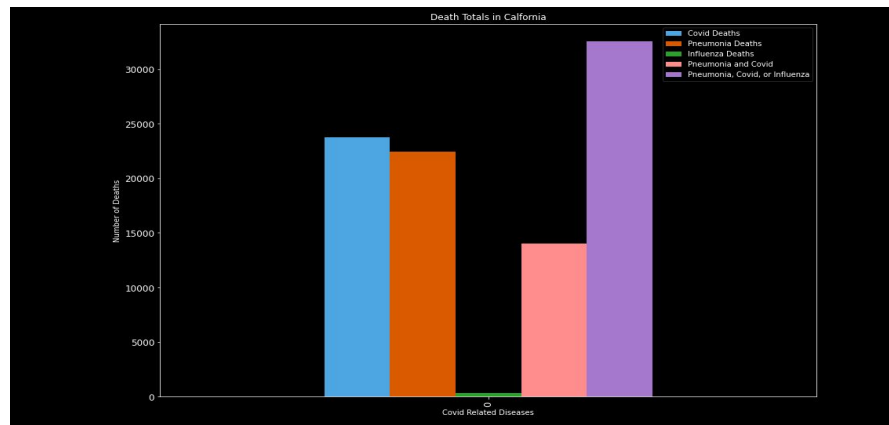
**Conclusion:** Poverty and Covid-19 infections are positively correlated in Los Angeles neighborhoods



# Total Deaths in California due to Covid vs. the Greater Los Angeles area

Nearly 25,000 covid deaths in California + an additional 32,000 deaths from 'covid related diseases'.

Los Angeles County peaking with over 20,000 covid deaths.





# Daily covid deaths in Greater LA region

From 1/22/20 to 3/25/21

Los Angeles county peaked at over 300 covid deaths in one week.

Spike a few weeks after holidays

San Bernardino County over taking LA county now.

