

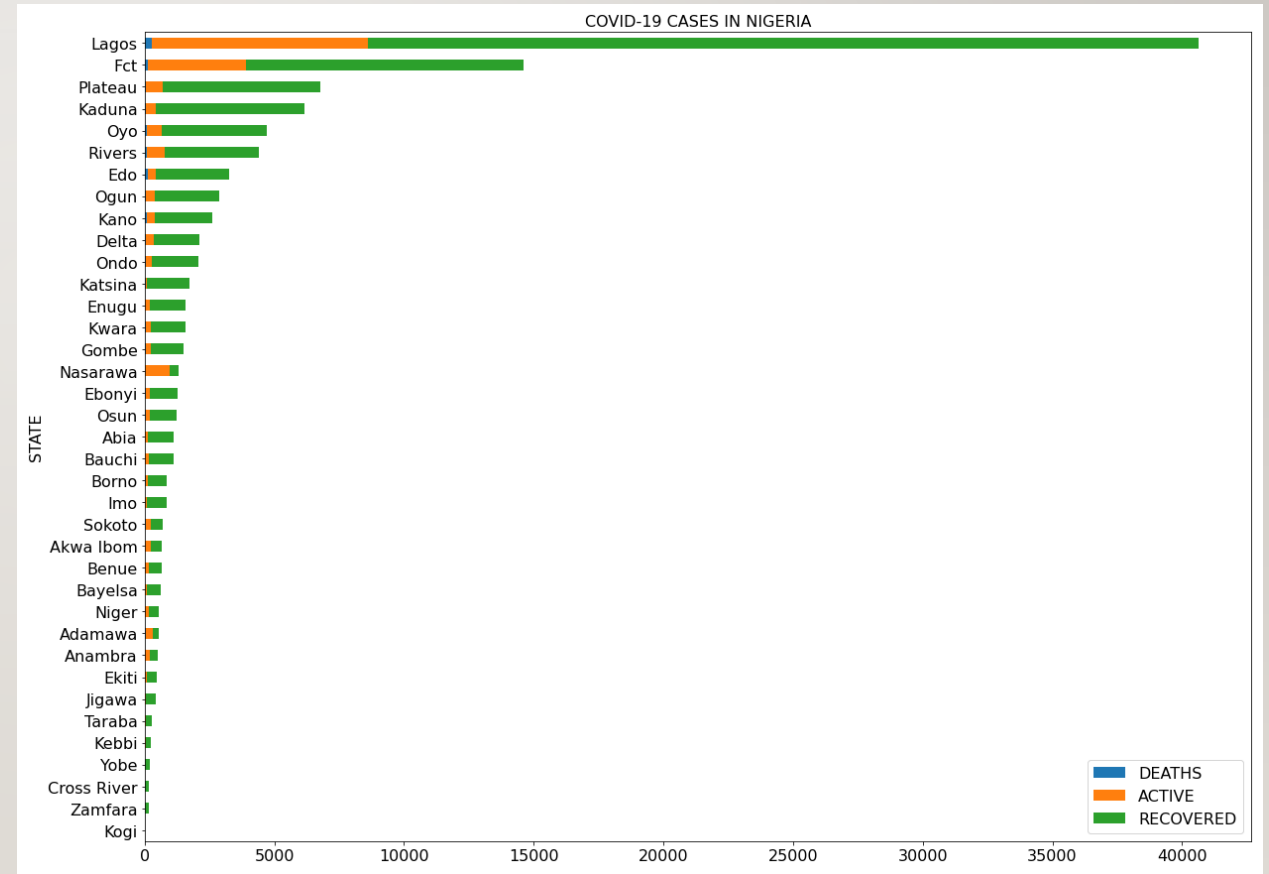
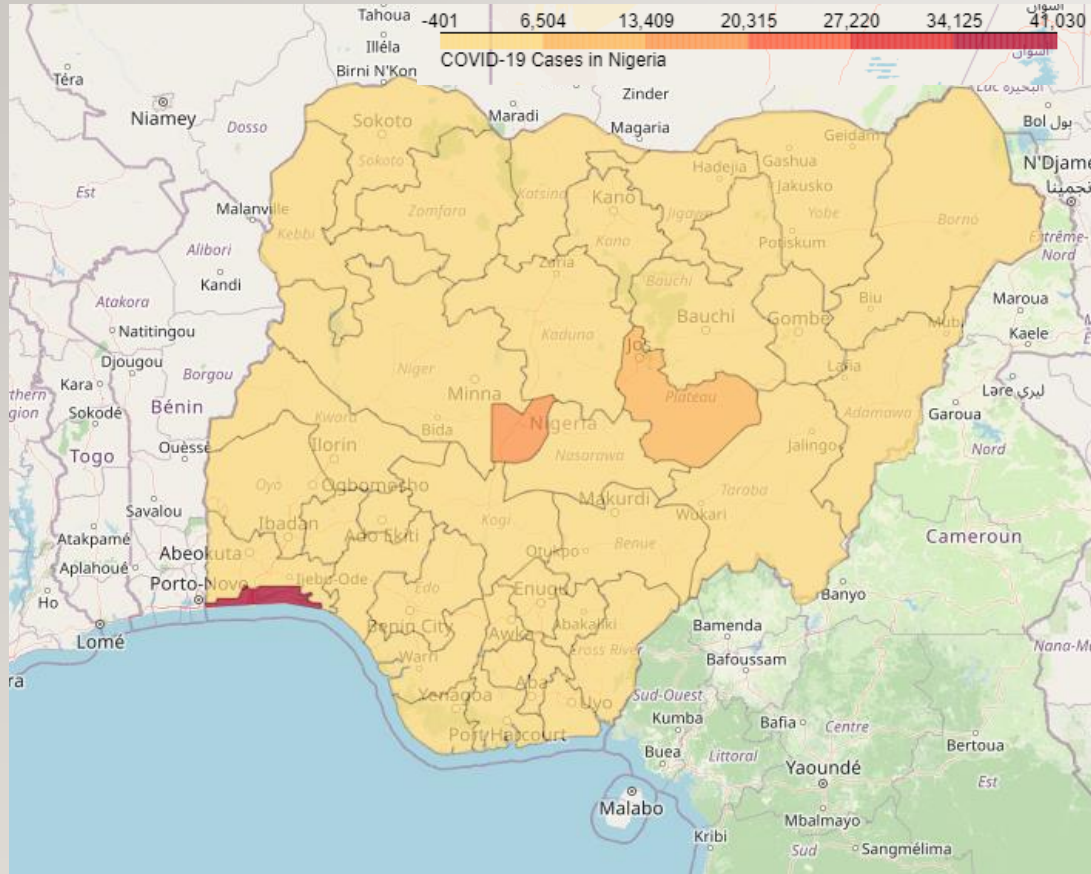
COVID-19 IN NIGERIA



OBJECTIVE

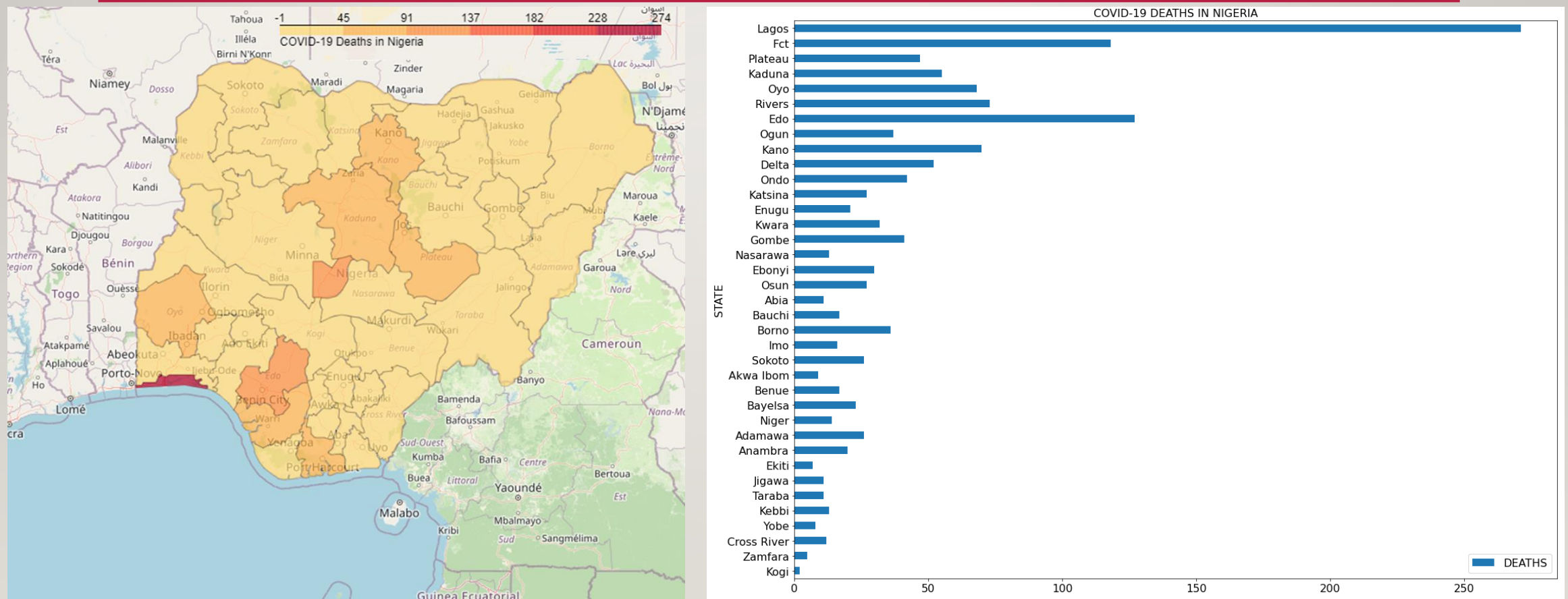
- Explore COVID-19 data in Nigeria
- Assess the impact of socio-economic factors in the prevalence of the disease
 - Unemployment Rate
 - Consumer Price Index
 - Health-care access – using Foursquare Location API data
- Make recommendations to health authorities for combating Pandemic

PREVALENCE OF DISEASE



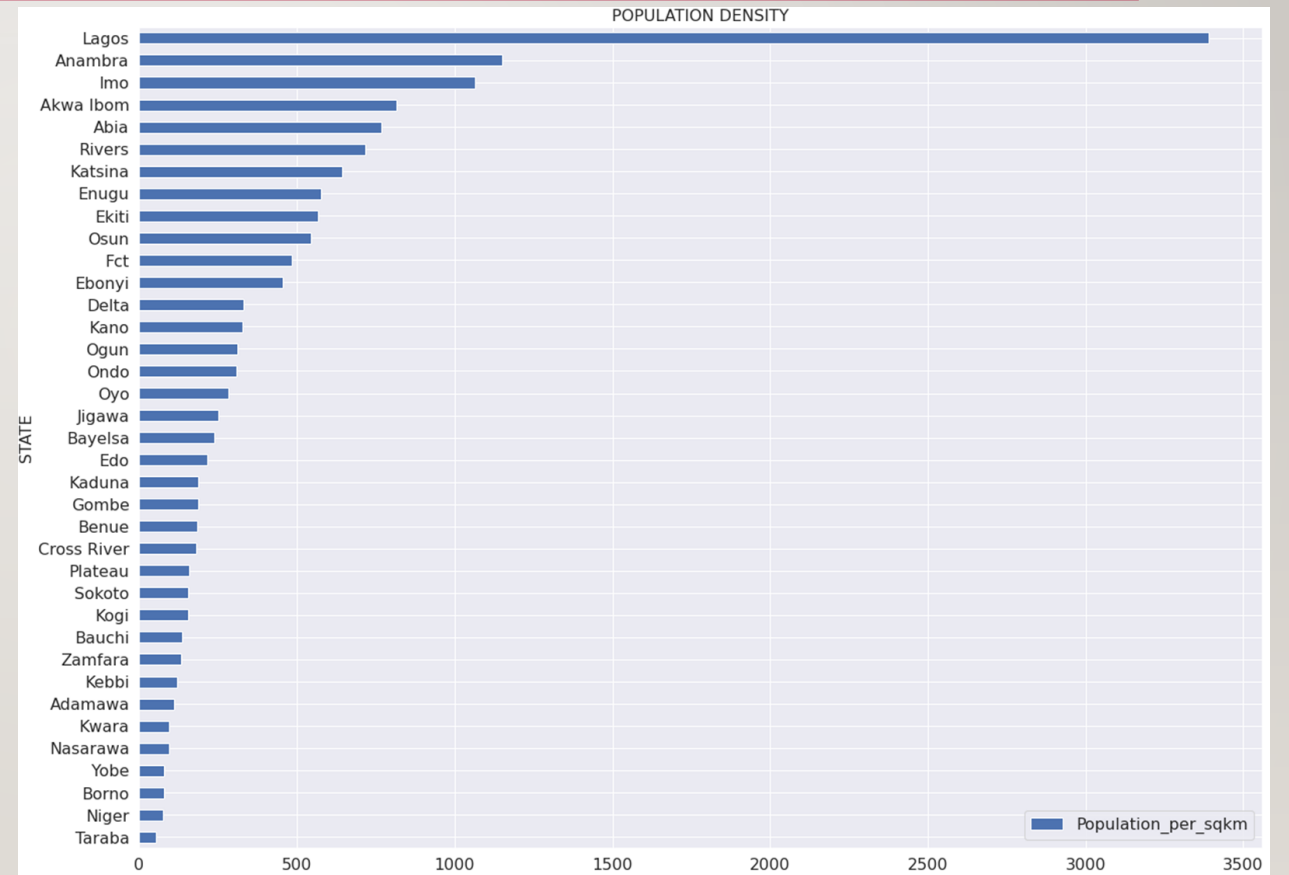
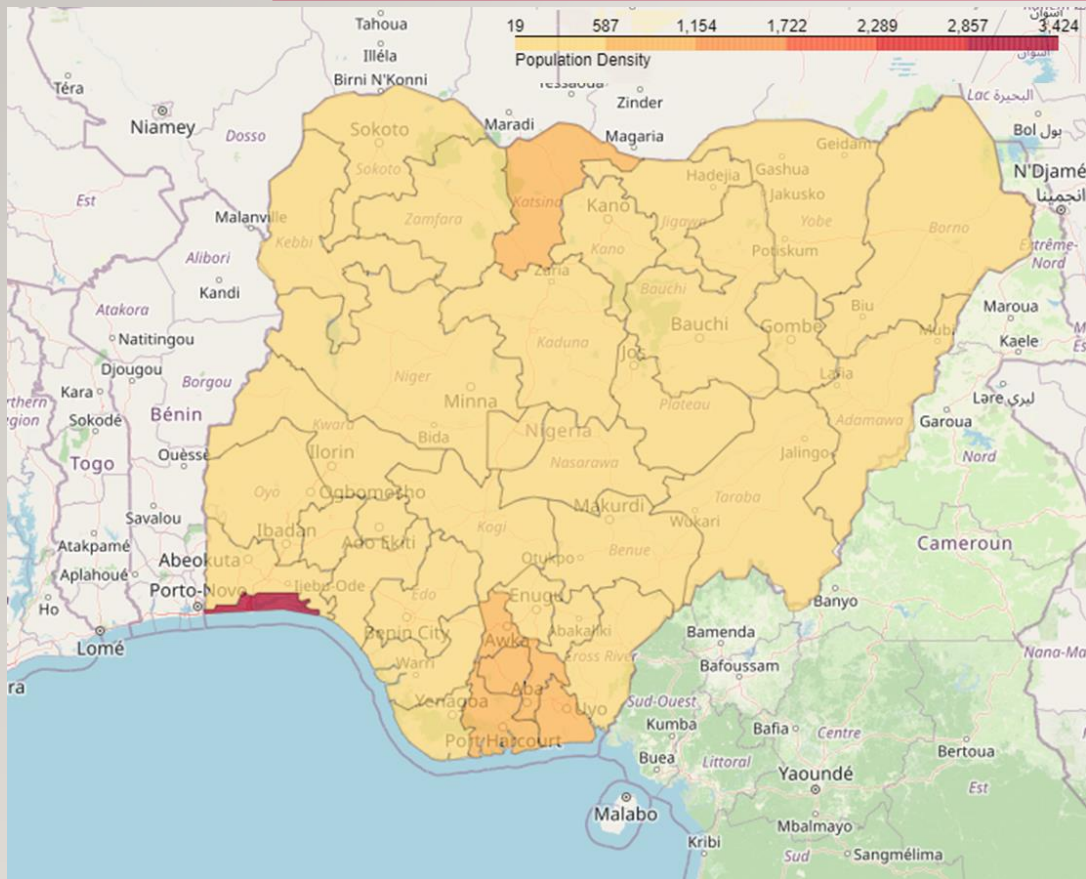
- States, like Lagos, FCT, with major urban hubs/cities have highest case counts

COVID-19 RELATED DEATH COUNTS



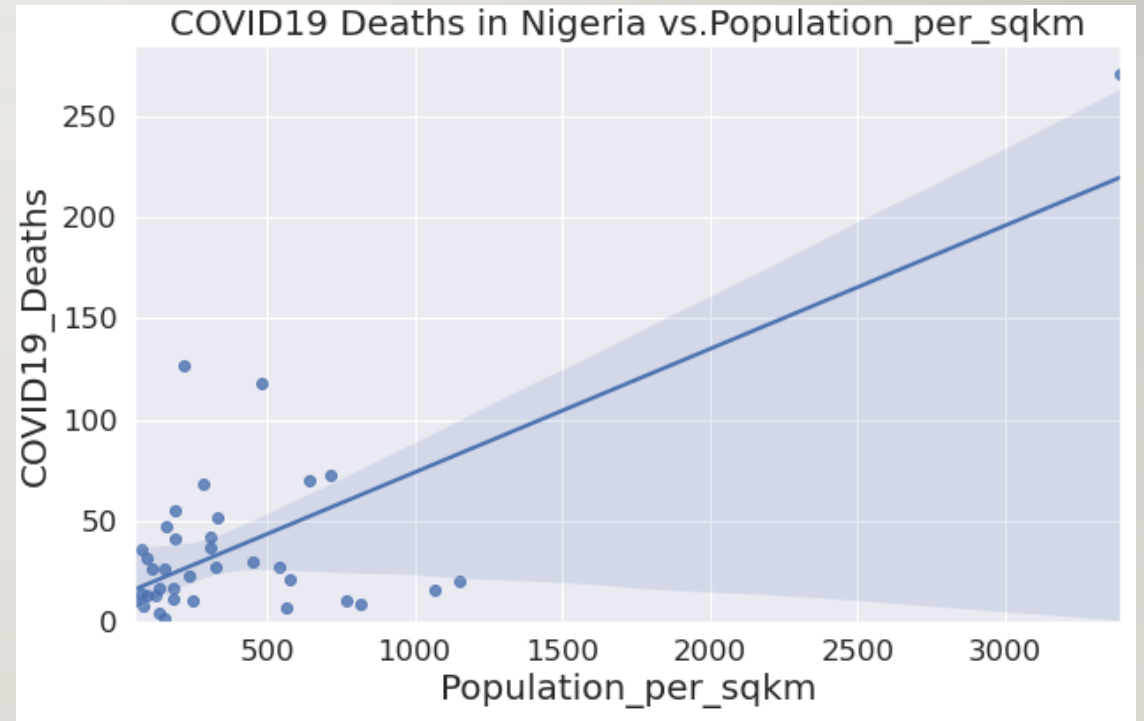
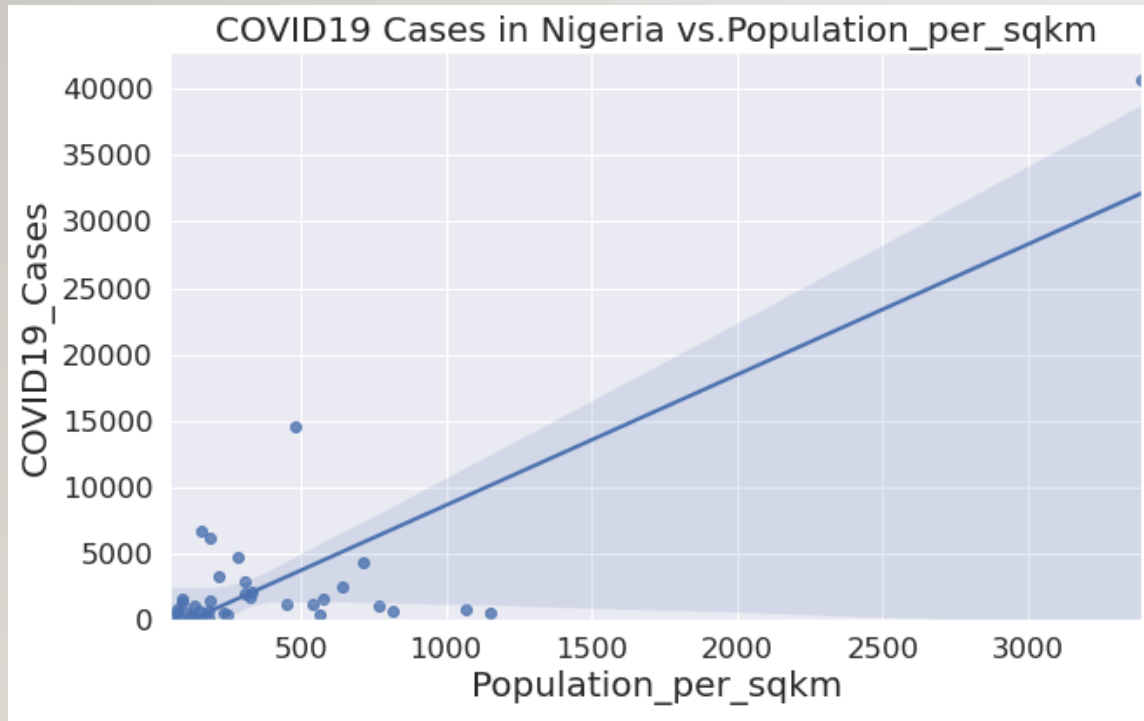
- States, like Lagos, FCT, with major urban hubs/cities have highest death counts

POPULATION DENSITY DATA BY STATES



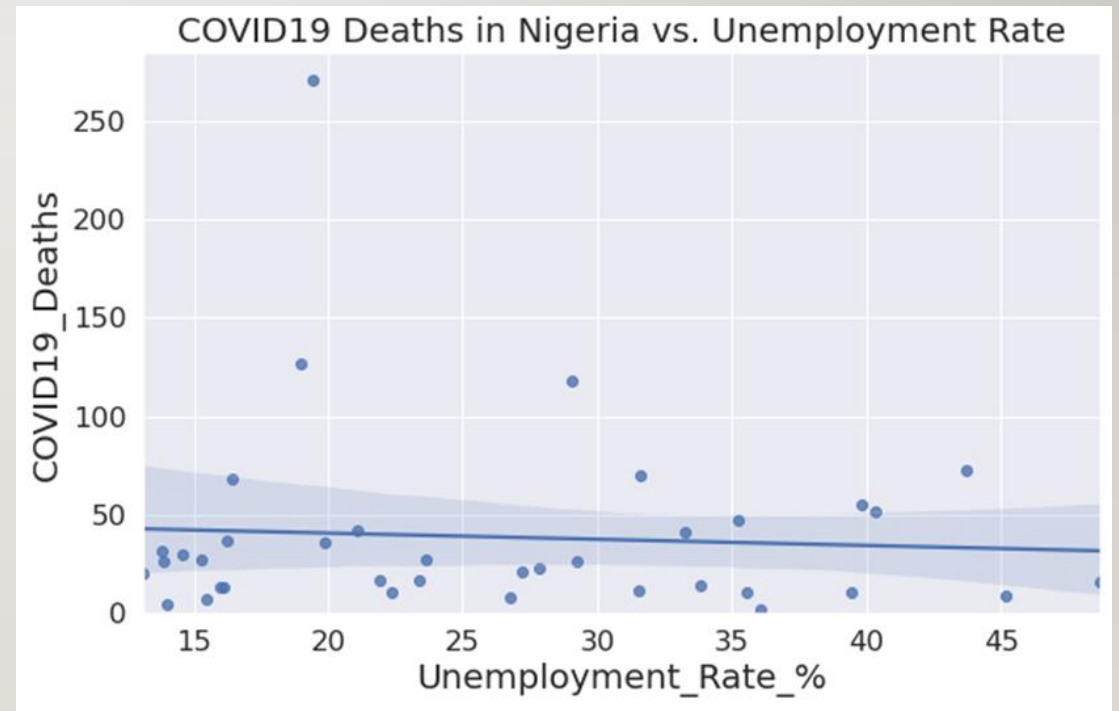
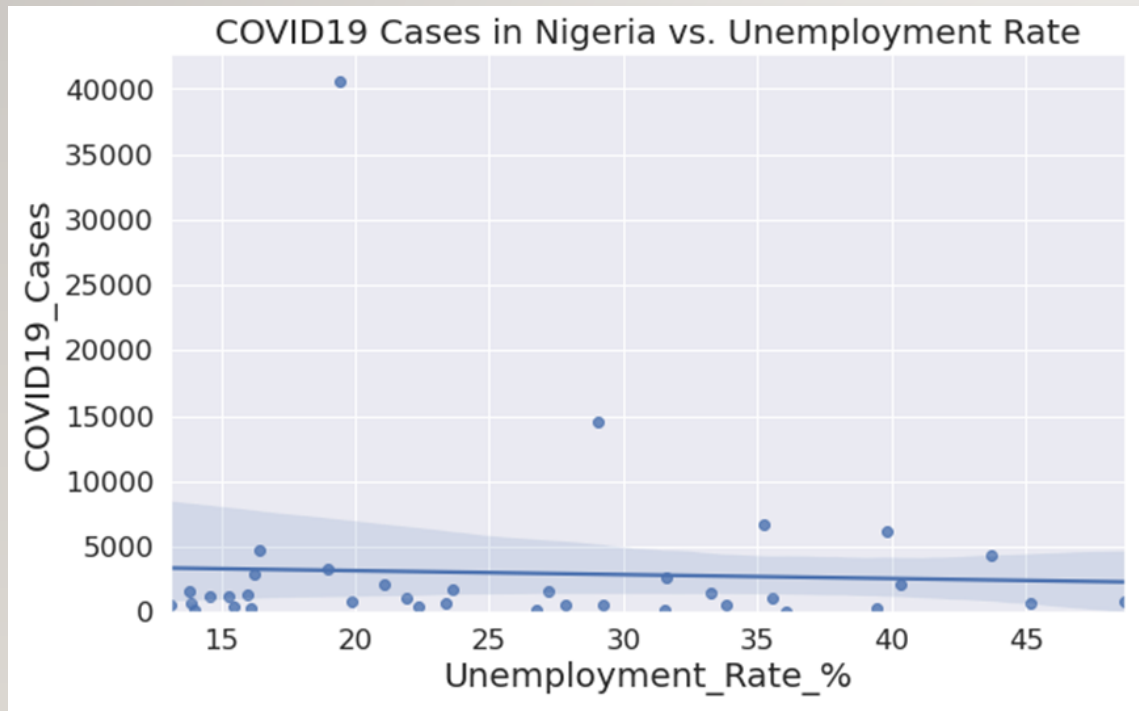
- Most states, except Lagos, with high population density do not have high COVID19 case counts
- Likely because such states may not have significantly populated urban centers

POPULATION DENSITY DATA CORRELATES TO COVID-19 COUNT



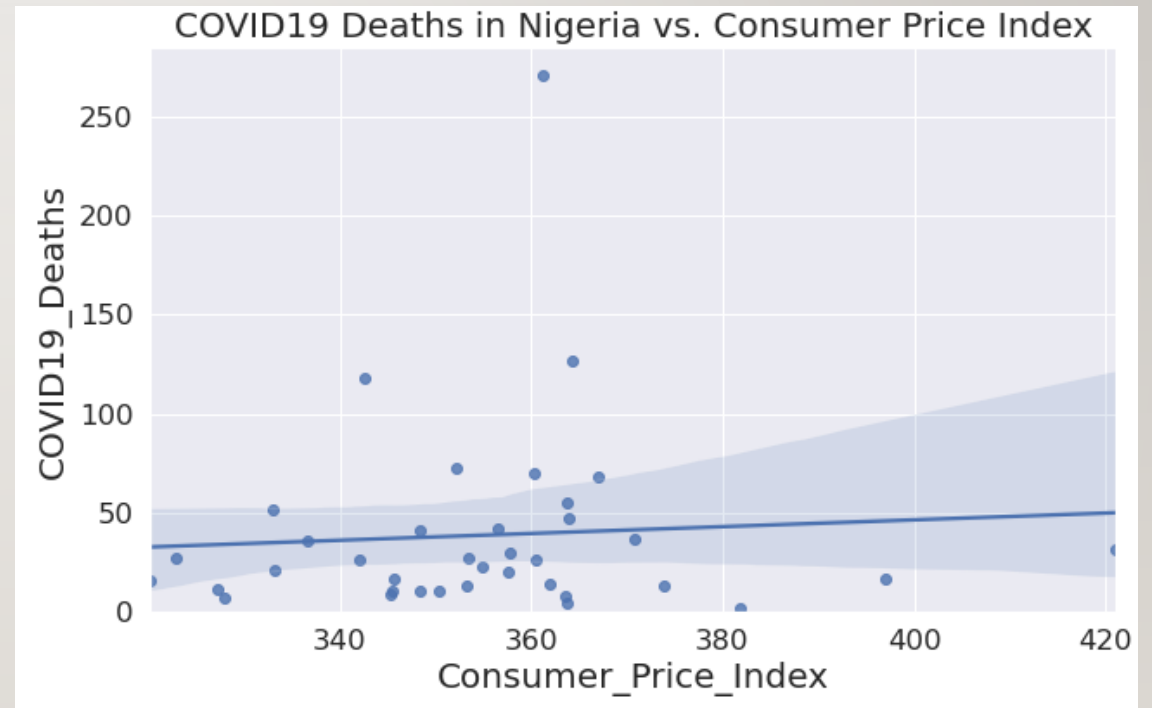
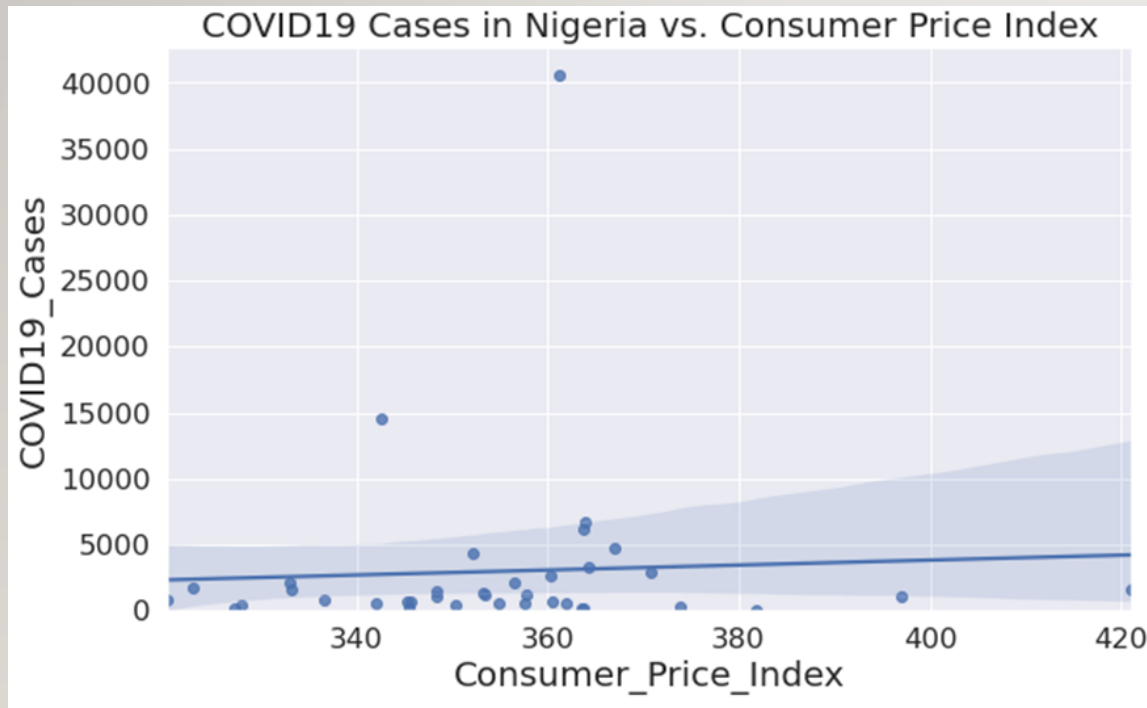
- Strong positive correlation between population density and COVID-19 Count is observed, as expected

CORRELATION TEST BETWEEN COVID-19 CASES AND UNEMPLOYMENT RATE



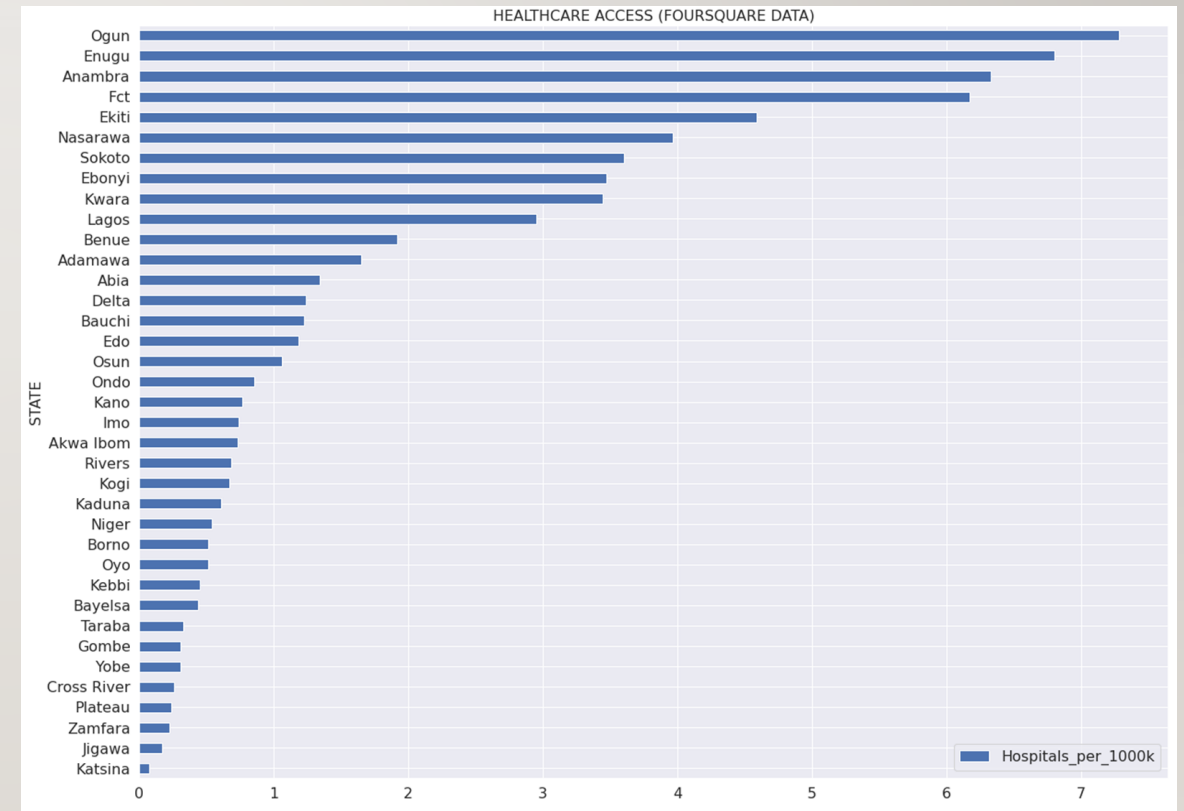
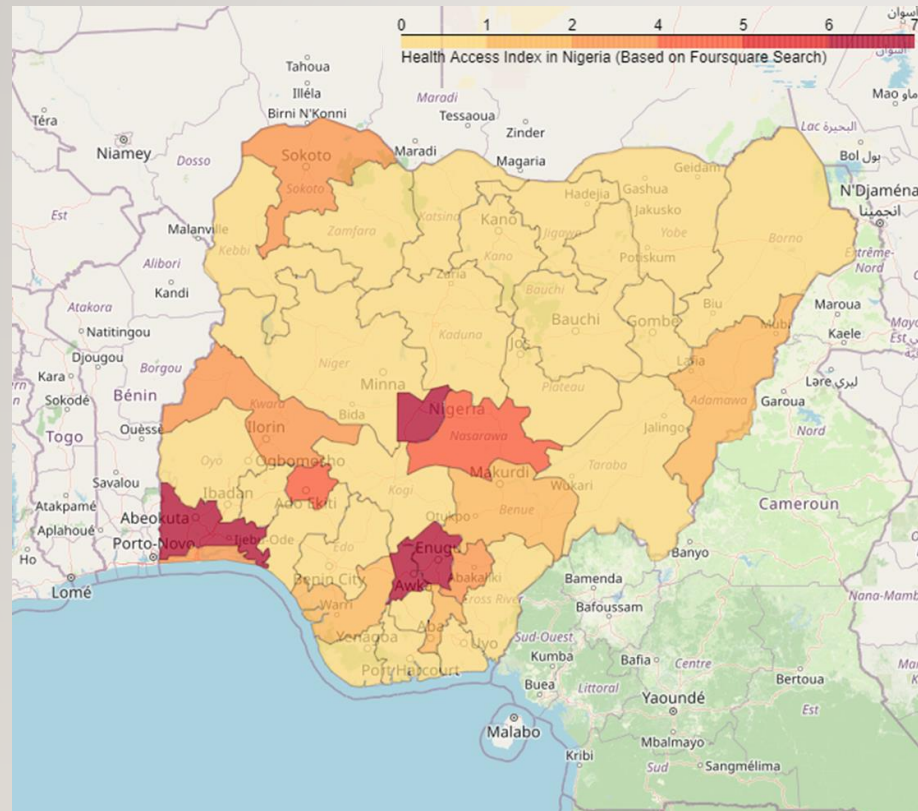
- Weak negative correlation between unemployment rate and COVID-19 case/death count
- Possibly because fewer people interacting in high exposure risk settings

CORRELATION TEST BETWEEN COVID-19 CASES AND CONSUMER PRICE INDEX



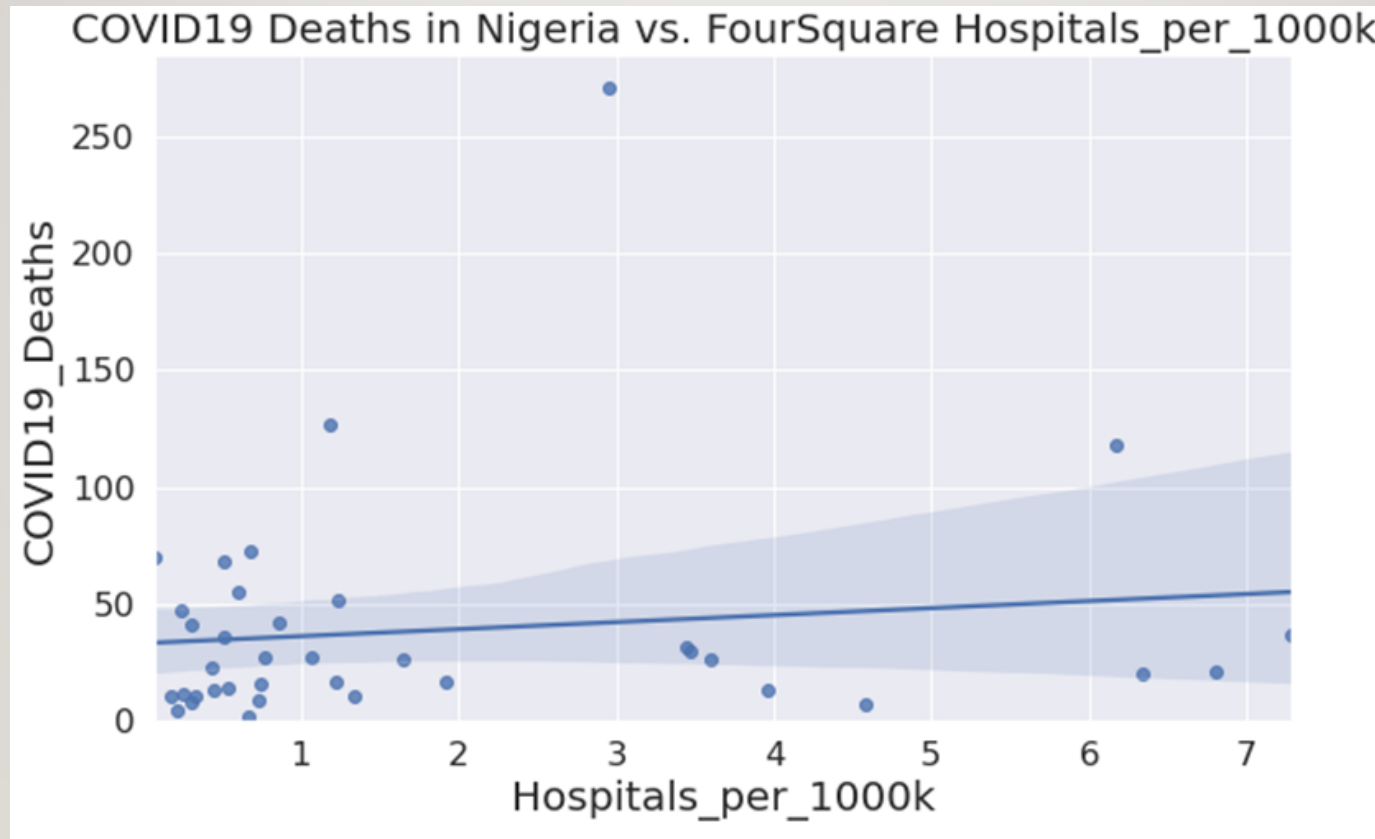
- Weak positive correlation between CPI and COVID-19 case/death count
- Fewer people have financial capacity to spend on protection measures

HEALTHCARE ACCESS (USING FOURSQUARE DATA)



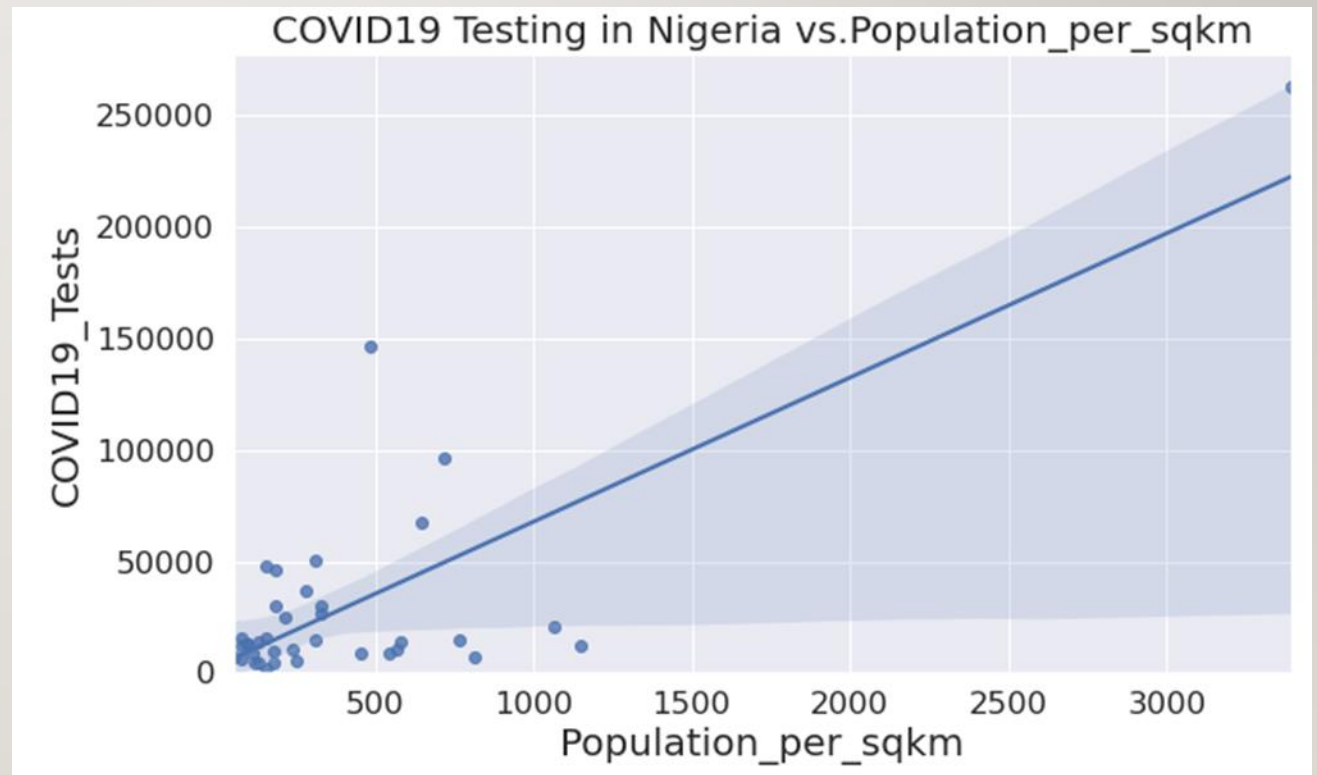
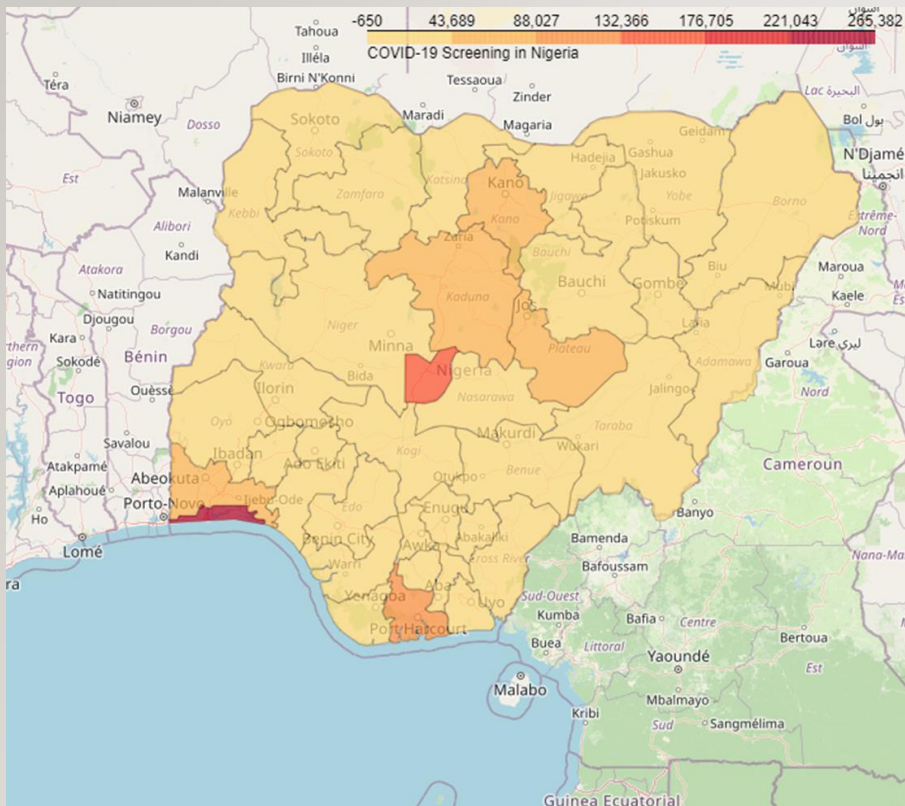
- FOURSQUARE API Search used Medical Center Category filter for venue search for each state
- Search result divided by population to give healthcare access index

COVID-19 DEATHS VS. HEALTHCARE ACCESS CORRELATION TEST



- Weak positive correlation between COVID-19 Death count and healthcare access
- Unexpected observation – likely due to limited available data on Medical Center venues on Foursquare

COVID-19 TESTING



- Government has placed focus for testing in States with high population density

RECOMMENDATIONS

- Health agencies should continue focus for testing on States with higher population density
- Health agencies should place testing focus on those States with big urban centers, even though they may have lower population density state-wide
- Improving the socio-economic conditions of the population will provide empowerment to protect against virus and prevent spread
- Improving access to health-care will help slow down the deaths due to the virus
- Government needs to collect and make more data accessible, to facilitate planning