Stats 140SL Assignment 4 Week 3

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Statement of Problem

The Coronavirus 2019 disease pandemic has caused an immense crisis in both health and the economy. From the spread of the infection, the pandemic has impacted people's lives, pushing hospital systems to their capacities, and has created economic deterioration.

How has the COVID19 pandemic and (its) politics effected the U.S. economy?

Formal Statistical Hypothesis

The opinion (belief) that "red" states have conferred vulnerability to death by COVID-19 among their populations.

Analysis (bivariate is perfectly acceptable)

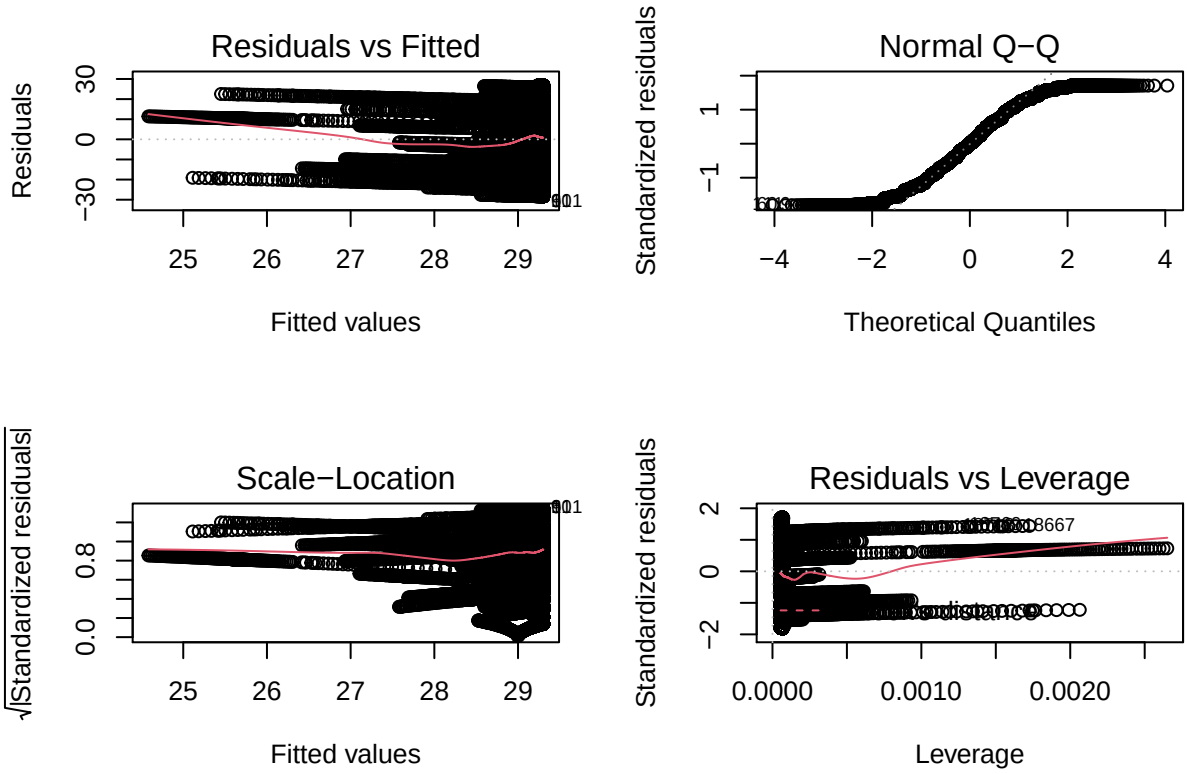
```
fit <- lm(covid_deaths$statefips ~ covid_deaths$num_death_number,
          data = covid_deaths)

summary(fit)
```

```
##
## Call:
## lm(formula = covid_deaths$statefips ~ covid_deaths$num_death_number,
##     data = covid_deaths)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -28.3016 -13.2354  -0.1588  12.9271  26.7643
##
## Coefficients:
##                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    29.3015570  0.1292263 226.746  < 2e-16 ***
## covid_deaths$num_death_number -0.0001153  0.0000210  -5.492 4.03e-08 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 15.67 on 18774 degrees of freedom
```

```
## Multiple R-squared:  0.001604,   Adjusted R-squared:  0.001551
## F-statistic: 30.16 on 1 and 18774 DF,  p-value: 4.029e-08
```

```
par(mfrow=c(2,2))
plot(fit)
```



Conclusion

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Limitations of the Analysis

One of the limitation of analyzing COVID-19 data would be uncertainty in the number of cases (e.g. mortality figure might include only deaths occur in hospitals(not other locations such as home).

Contributions

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