

Is Covid-19 Correlated with Traffic Count?Description:

The objective of this project is to understand if there is a correlation between Covid 19 and traffic count. I will have three data sets, two of the data sets will represent the traffic count of a particular area and time of day, but different years. Data like traffic count will be extracted from 2019 and 2020 traffic count to compare and see if there is an increase or decrease in traffic count. While the third data set will represent Coronavirus of 2020 and will help me compare correlation between case count of Coronavirus and traffic count of 2020.

The specific data that I will keep track of is an area ID of 110005 at an interval of 7 pm to 8 pm for both 2019 and 2020 traffic count data sets. Also, all data sets will have a DID which represents date ID, for each month and day they are bound to a unique ID; therefore, if there was a date representing 05/02/2019 and 05/02/2020, the DID for both of them are 37 regardless of the year. This DID system helps me align dates between all data sets when merging them.

2019 Traffic Count Data Set

Date ID

1	RC_STATION	REGION	REGION_CODE	COUNTY_CODE	STATION	RCSTA	FUNCTIONAL_CLASS	FACTOR_GROUP	YEAR	MONTH	DAY	DID
2	11_0005	1	1	1	5	110005	16	30	2019	3	1	1
3	11_0005	1	1	1	5	110005	16	30	2019	3	2	2
4	11_0005	1	1	1	5	110005	16	30	2019	3	3	3

2020 Traffic Count Data Set

Date ID

1	RC_STATION	REGION	REGION_CODE	COUNTY_CODE	STATION	RCSTA	FUNCTIONAL_CLASS	DATE_OF_INTEREST	YEAR	MONTH	DID	DAY
2	11_0005	1	1	1	5	110005	16	3/1/2020	2020	3	1	1
3	11_0005	1	1	1	5	110005	16	3/2/2020	2020	3	2	2
4	11_0005	1	1	1	5	110005	16	3/3/2020	2020	3	3	3

Covid 19 Data Set

Date ID

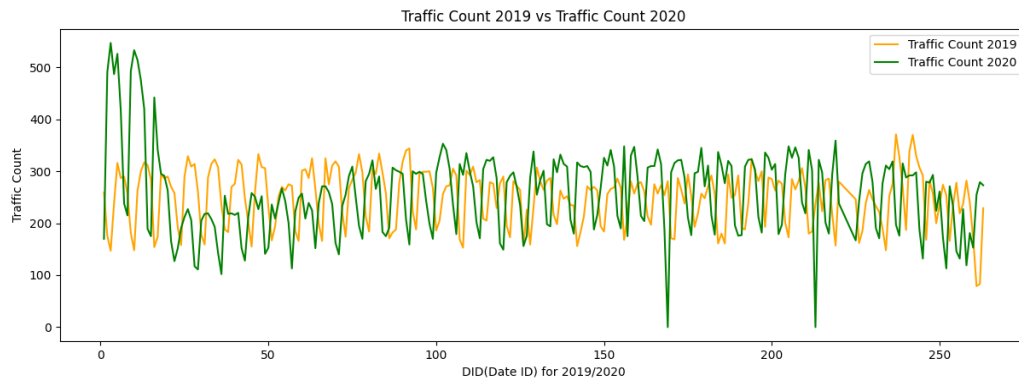
Case Count

1	DATE_OF_INTEREST	DID	RCSTA	YEAR	MONTH	DAY	CASE_COUNT
2	3/1/2020	1	110005	2020	3	1	0
3	3/2/2020	2	110005	2020	3	2	0
4	3/3/2020	3	110005	2020	3	3	1
5	3/4/2020	4	110005	2020	3	4	5
6	3/5/2020	5	110005	2020	3	5	3

Conclusions:

After a comparison of traffic count of 2019 and 2020, it turned out 2020 had greater traffic count per day than 2019. Since the previous test, I wanted to display the comparison with a line graph with the help of matplotlib from the python library. The line graph (G1) shows minimal differences between the two, but with 2020 has a slight increase, showing that Covid 19 had minimal influence on the traffic count. Later, I created a graph (G2) to compare the relationship between Covid 19 and 2020 traffic count, the graph shows that while Covid 19 cases increased by a large amount, the number of traffic count slightly increases. Once again showing that Covid 19 has a minimal impact on traffic count at that time and year, and if it does it slightly increases the traffic count compared to 2019.

G1



G2

