

Pandemic-Related Traffic in NYC

A UVA Data Science Case Study by Grace Berrien, 2022



Prompt:

New York City is known for its bright yellow taxi cabs and also the traffic that comes along with them. Rush hour in New York City is generally understood as the commuting times to and from work, from 7-9am and 4-6pm on weekdays [2]. Although rush hour became less congested during the height of the Covid-19 pandemic with the start of remote working, did accidents caused during rush hour similarly decline to the same extent?

In May 2022, NYC Mayor Eric Adams launched a \$4m campaign to “counter rising traffic violence and curb dangerous driving behaviors that have occurred at higher rates since the onset of the COVID-19 pandemic” [1]. This campaign, titled “Vision Zero” seeks to eliminate all traffic fatalities and aims to reach New Yorkers across all 5 boroughs.

Deliverable: Using the provided dataset, attached below, create a statistical test to predict and test if traffic accidents have increased due to COVID, and if so, percentually by how much. Include all outside research materials, all python files used to create the test, and all statistical testing and results. Assess your work based on the rubric and also relate your findings back to Adams's “Vision Zero” initiative: although this data is from January 1, 2020 through August 2020, is this program necessary for the city based on your findings? Try to think about to what extent COVID increased traffic accidents and if you deem it wise to institute a program like this in 2022 as a result (For more detail, see rubric CS-Traffic).

Data source to initially use (you can build off of it if you need but begin with this data):

<https://www.kaggle.com/datasets/mysarahmadbhat/nyc-traffic-accidents?resource=download>

Sources:

[1] Eyewitness News, “Graphic billboards going up across New York City to warn about the dangers of speeding,” *ABC7 New York*, 2-May-2022. [Online]. Available: <https://abc7ny.com/billboards-new-york-city-mayor-eric-adams-vision-zero/11811316/>. [Accessed: 12-Dec-2022].

[2] H. Law, “Safety Tips for rush hour traffic,” *Heintz Law*, 19-Dec-2019. [Online]. Available: <https://www.heintzlaw.com/tips-for-rush-hour-traffic/>. [Accessed: 09-Sep-2022].