US Traffic Accidents 2020 vs 2021

IST 719: Information Visualization, Fall 2022

Instructor: Joshua Introne
Author: Xintian Zhang



Introduction

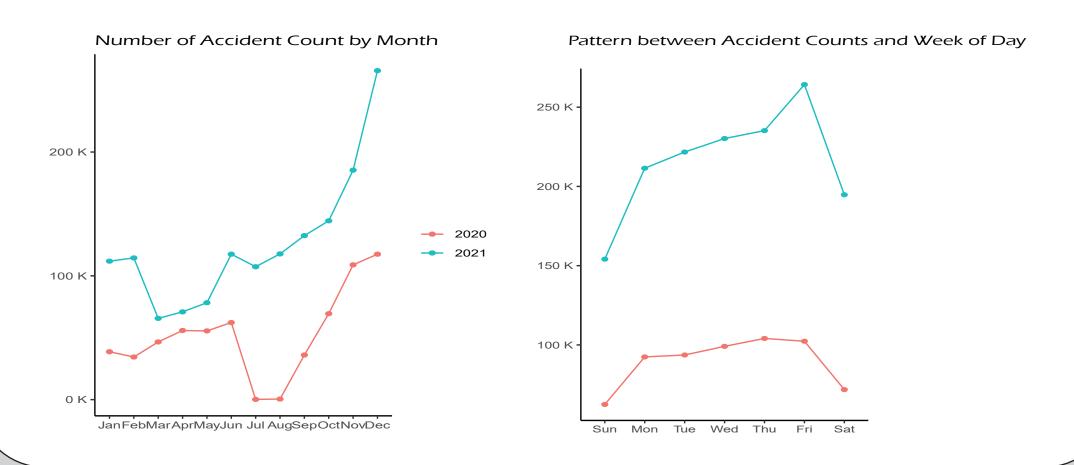
There are hundreds of thousands of traffic accidents occur in the United States each year, and the number continues to increase every year. In 2020, there were 625,864 traffic accidents in 49 states of the US. However, that surges to 1,511,745 in 2021.

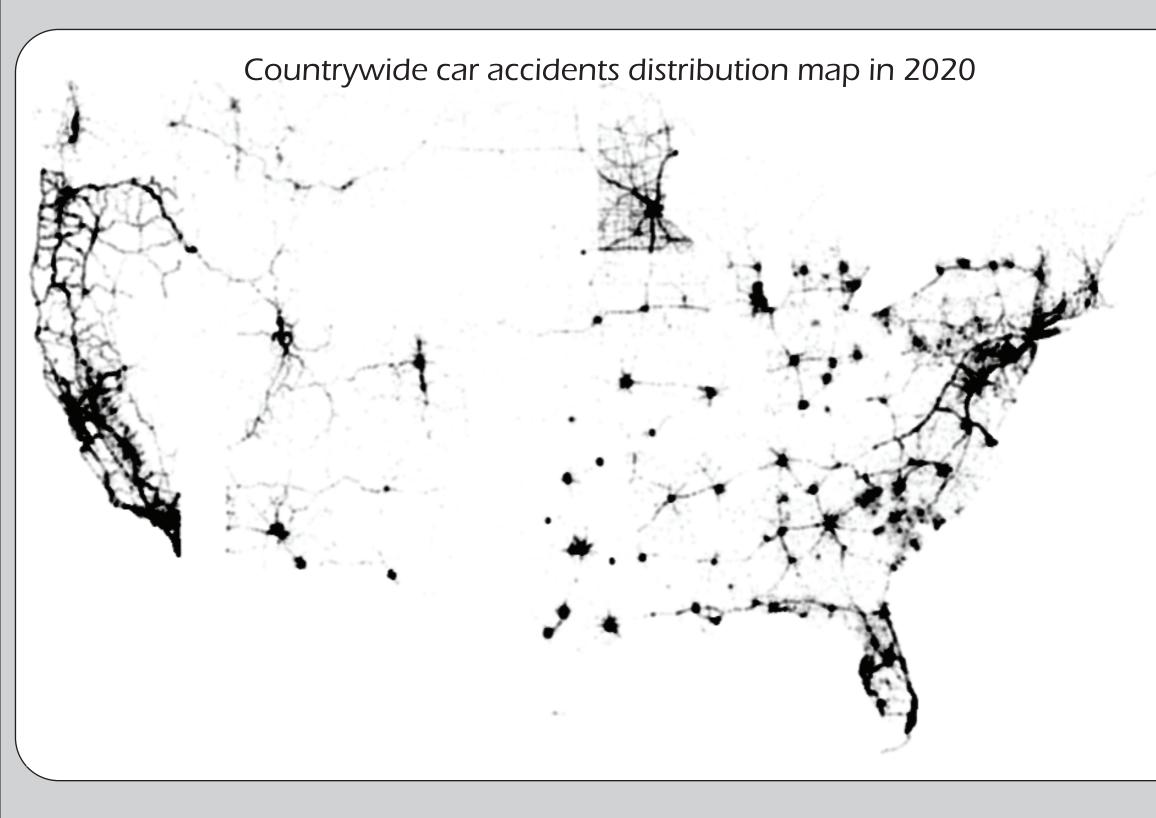
Motivation

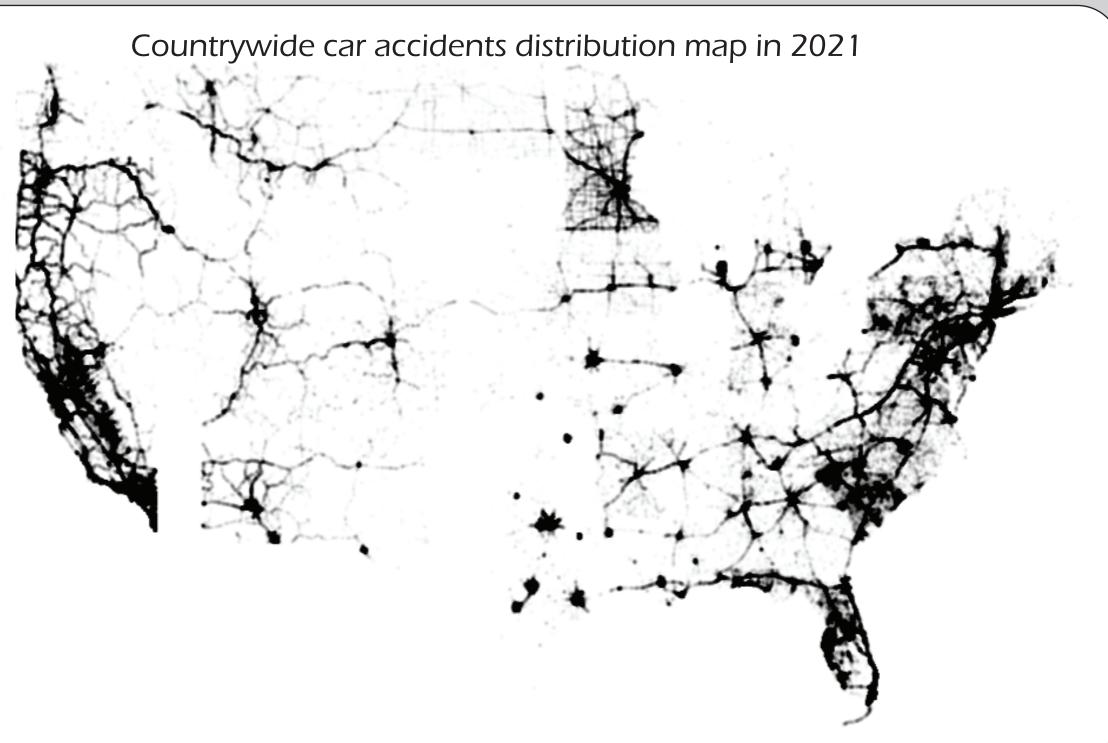
People who are interested in traffic condition or daily news could be the audience. They can find some interesting outcomes.

Description

The original dataset covers 49 states of the US, and the data are collected from February 2016 to December 2021. There are 2,845,342 rows and 47 columns in the original dataset. To reduce the data, I selected year 2020 and 2021 for analysis.

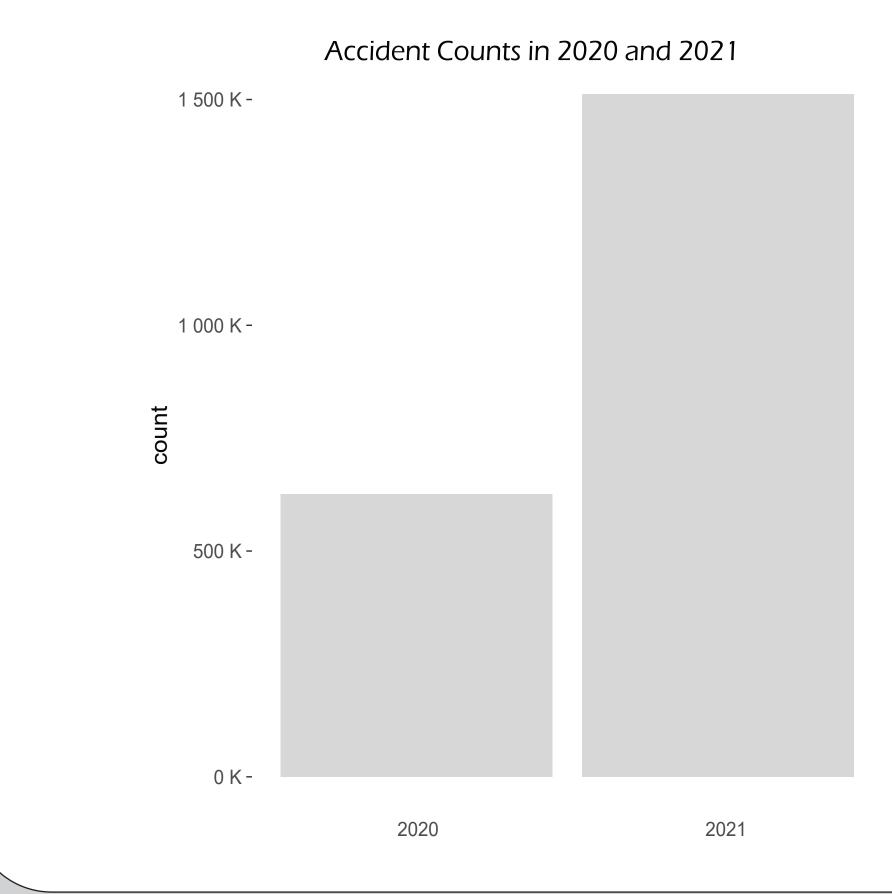




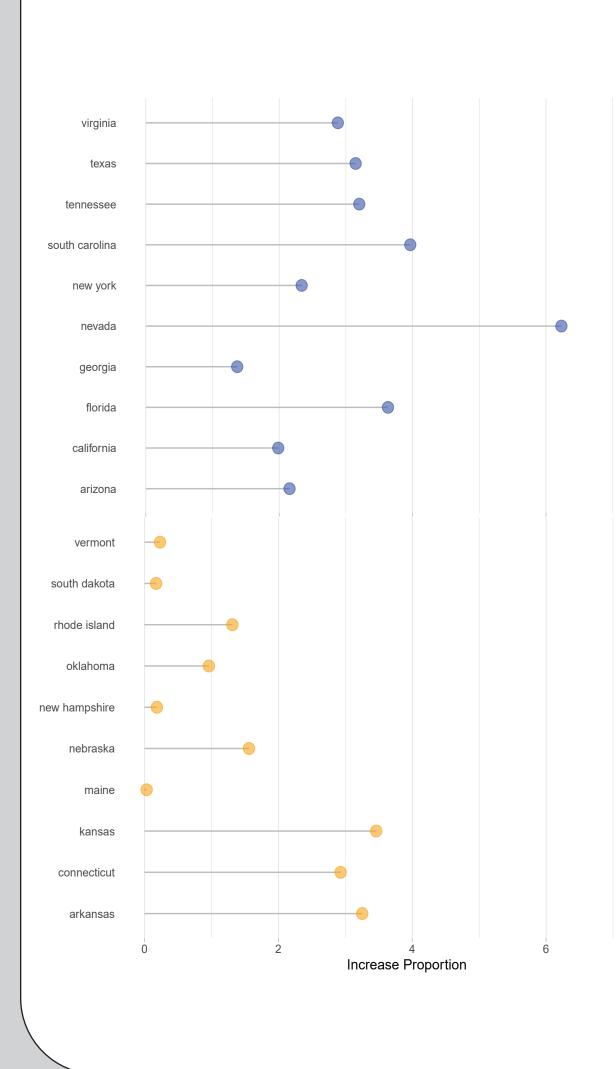


What is the Obvious Difference?

Compare with 2020, the total number of traffic accidents increase a lot, and the traffic accidents on the road between states become obvious.



Why some States Increase More?



Due to the COVID-19 pandemic, a number of lockdowns have been implemented around the US in 2020. People have to suspend travel plans. With the reopening in 2021, people began to travel revenge. The increase proportions in the most 10 visited states was significantly higher than the least 10 visited states.

Sources:

The most visited states in us:https://vividmaps.com/most-visited-us-states/US traffic accidents (2016-2021):https://www.kaggle.com/datasets/sobhanmoosavi/usaccidents? R package: lubridate, ggplot2, tidyr, dplyr, tidyverse,viridis