

# ORIE 5741 Project Proposal: 2019 Traffic Injuries Analysis

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We will be working on the 2019 Road Traffic Injuries dataset found at <https://www.kaggle.com/dorianvoydie/2019-database-of-road-traffic-injuries?select=usagers-2019.csv> (<https://www.kaggle.com/dorianvoydie/2019-database-of-road-traffic-injuries?select=usagers-2019.csv>). The dataset includes four tables that provide details about the locations, drivers and vehicles of each recorded road traffic accident in 2019 in France and all of its territories.

The main question we will be trying to answer is what actions to take to reduce road accidents.

Car accidents are common and deadly in modern society. Internationally, road traffic crashes cause the death of around 1.3 million people each year, and cost most countries 3% of their GDP (data source: <https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries> (<https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries>)). In the United States, more than 38,000 people die every year in crashes on roadways. An additional 4.4 million are injured seriously enough to require medical attention (data source: <https://www.asirt.org/safe-travel/road-safety-facts/> (<https://www.asirt.org/safe-travel/road-safety-facts/>)). A study on what caused these accidents and what actions can be taken to minimize the risk of future accidents can help governments and industry leaders implement new policies or standards, which can save people's lives and increase road safety. Currently, car accidents are the leading cause of death in the U.S. for people aged 1-54. We hope that our results can help prevent road accidents and save more lives.

The 2019 Road Traffic Injuries dataset includes over 58,000 rows of data on each recorded accident, which shows over 50 features including accident location, road conditions, vehicles involved and the victim information. This level of detail will allow us to answer multiple questions about what caused a road accident, and from there, we can understand how to prevent future accidents from happening. Some of the questions we will be considering during this analysis will be:

1. What type of road/traffic are more likely for an accident to happen?
2. What type of actions are likely to cause severe traffic accidents?
3. How many accidents may happen in the next months/days?
4. What standards or policies are effective to prevent traffic accidents?