Impact of Speed Bumps on Road Safety in NYC

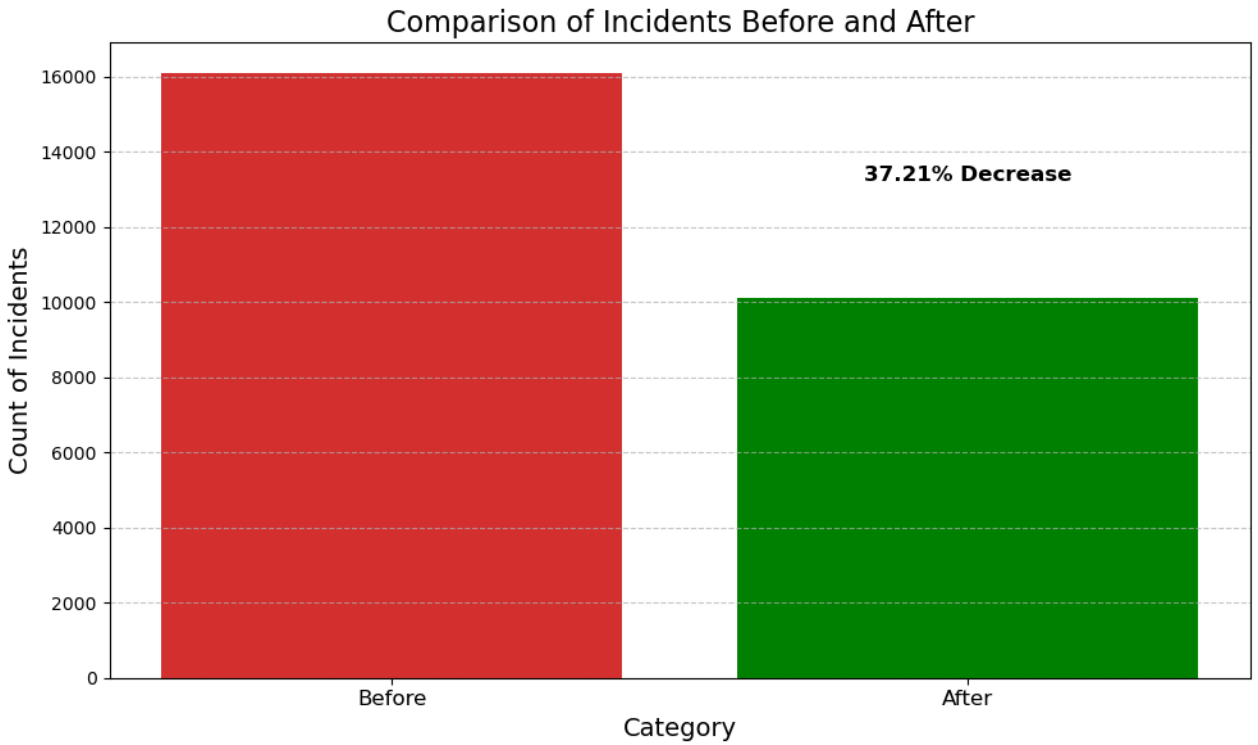
A Geospatial Analysis of Accident Data by Brandon Washington

Research Question and Approach

- **Research Question**: Are speed bumps effective in reducing the number of road accidents, injuries, and fatalities in New York City?
- **Methodology:**
  - Geospatial Analysis: Overlay accident locations with locations of known speed bump zones
  - Timeframe: Determine accidents which have occurred within a speed bump zone over a equal time frame from the speed bumps installation date to the present
  - Comparative analysis of accident counts before and after installation, including specific categories like number of persons killed, number of persons injured, etc.

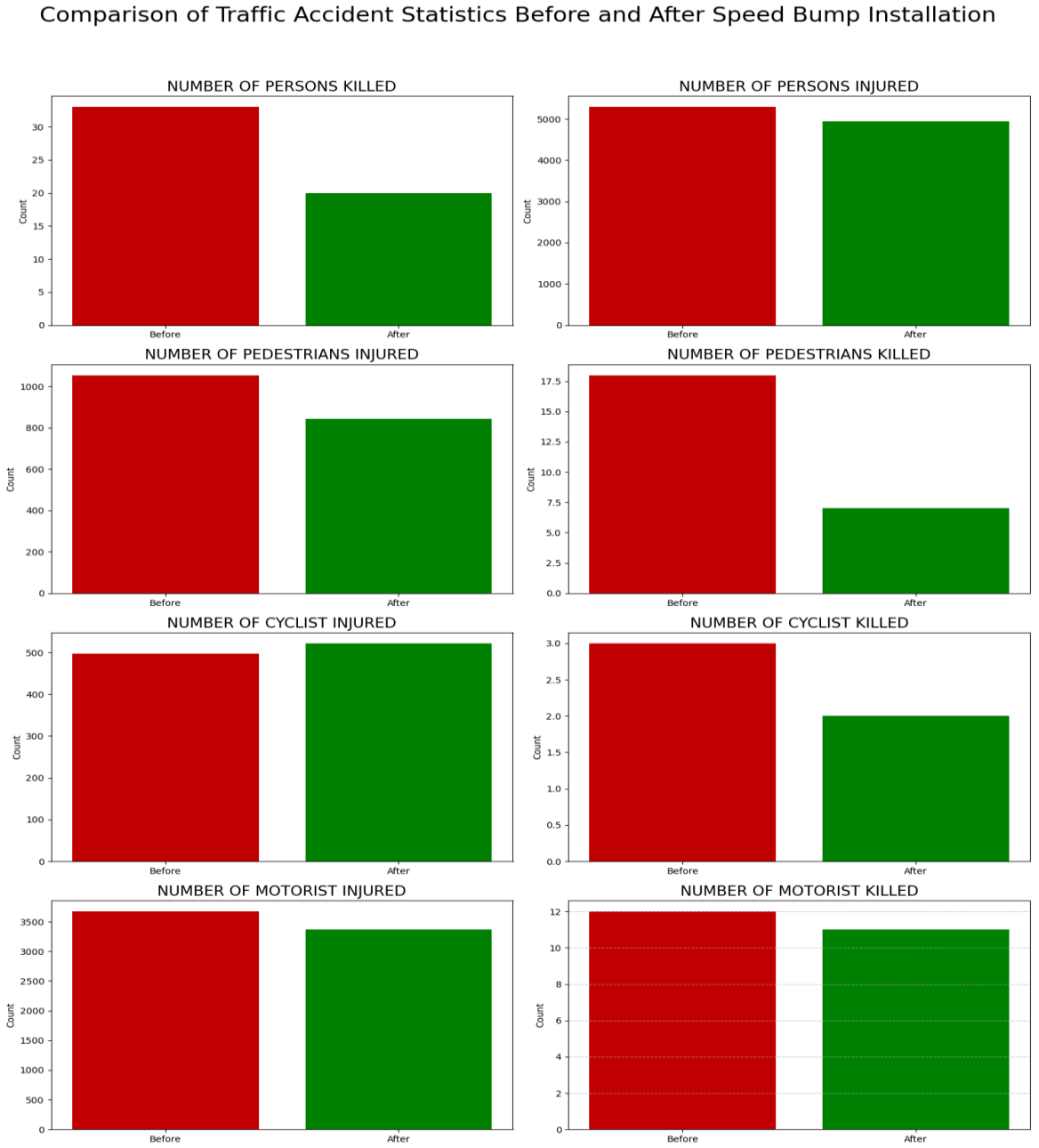
Results

- 37% Decrease In overall Traffic related incidents in speed bump zones



Further Results

- Persons Killed – 39% Decrease
- Pedestrians Killed – 61% Decrease
- Cyclist Killed – 33% Decrease
- Motorist Killed – 8% Decrease
- Persons Injured – 39% Decrease
- Pedestrians Injured – 20% Decrease
- Cyclist Injured – 5 % Increase
- Motorist Injured – 8% Decrease



Conclusions and Further Considerations

- **Conclusion**: At the surface level speed bumps appear to be effective at creating safer streets for drivers and pedestrians.
- **Considerations and Future Analysis** : This work serves as a brief preliminary analysis. Future work should consider the best time frames for analysis and identify whether macroscopic traffic trends (such as the decrease in reported accidents after the Covid 19 Pandemic) are influencing results.