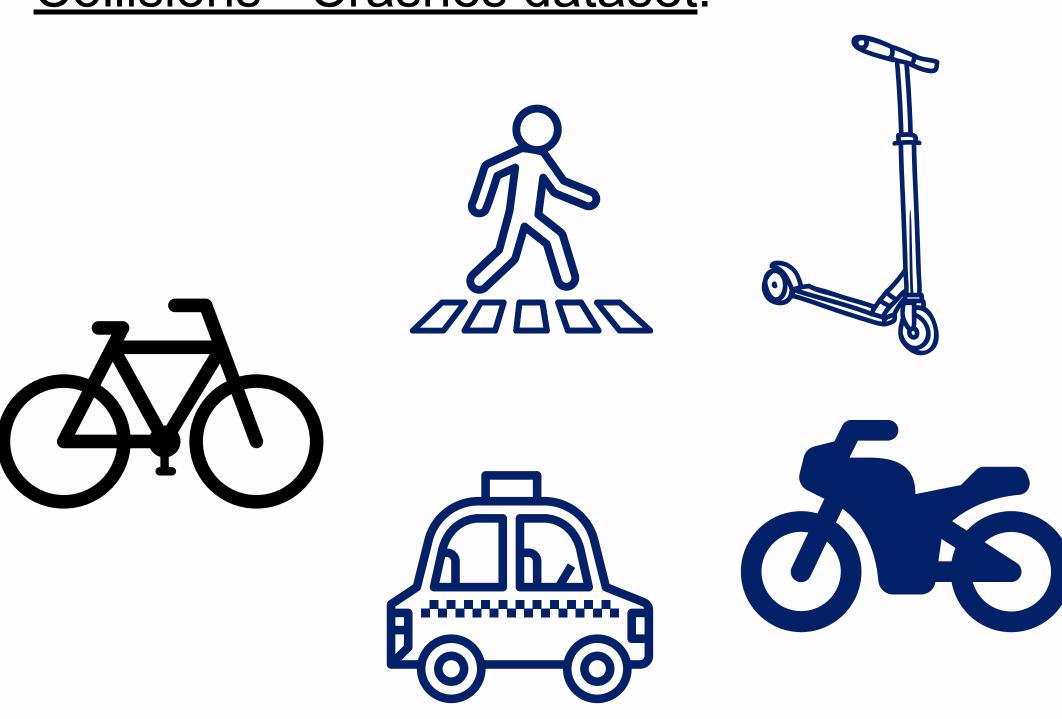
SANJANA JAIRAM

DATA SCIENCE | LUDDY SCHOOL OF INFORMATICS, COMPUTING AND ENGINEERING

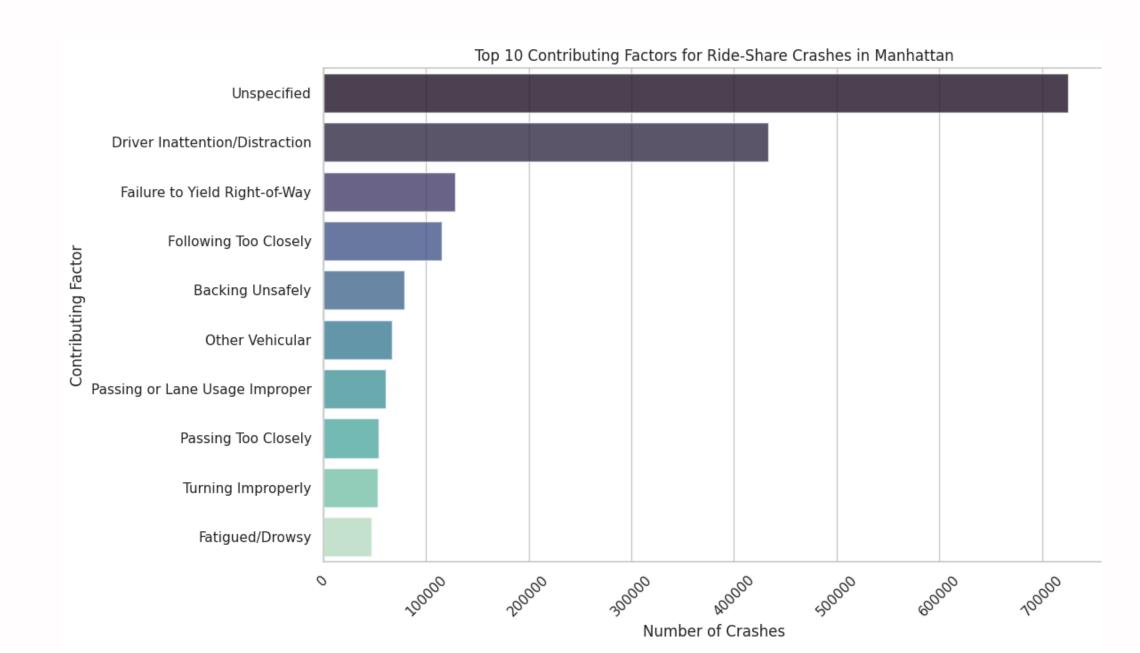
Objective

This study examines the impact of ride-sharing services on crash patterns in New York City, with a specific focus on enhancing safety outcomes for pedestrians, cyclists, and motorists.

Data: <u>NYC OpenData Motor Vehicle</u> <u>Collisions - Crashes dataset</u>.



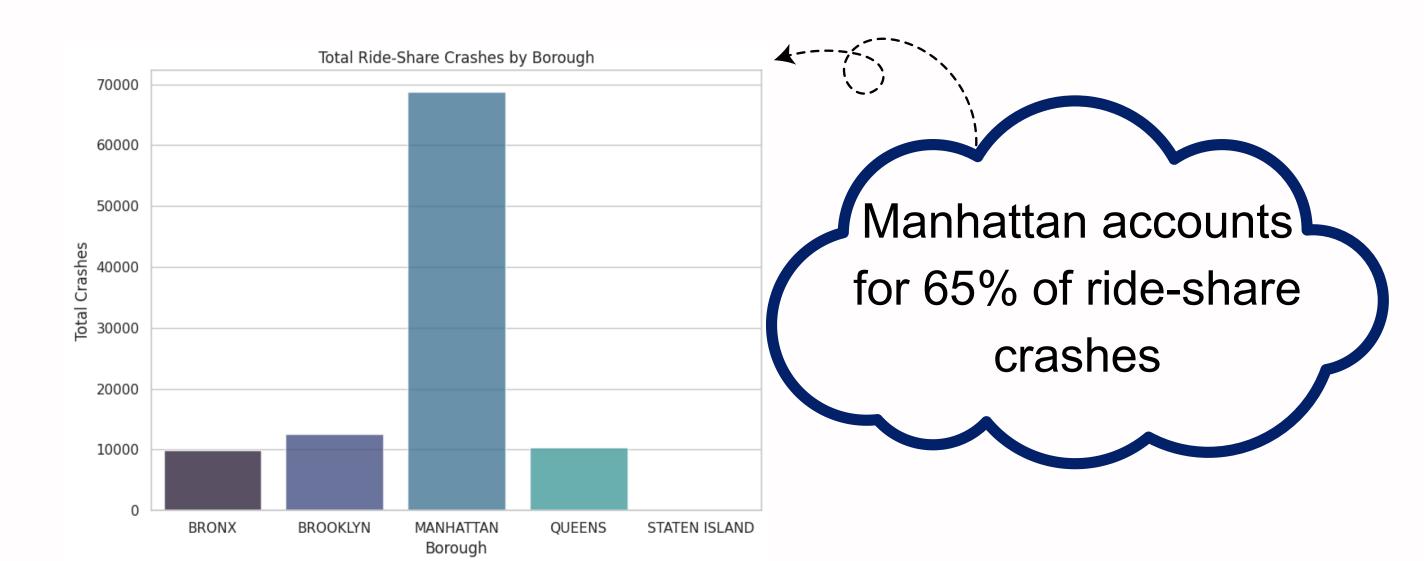
Contributing Factors

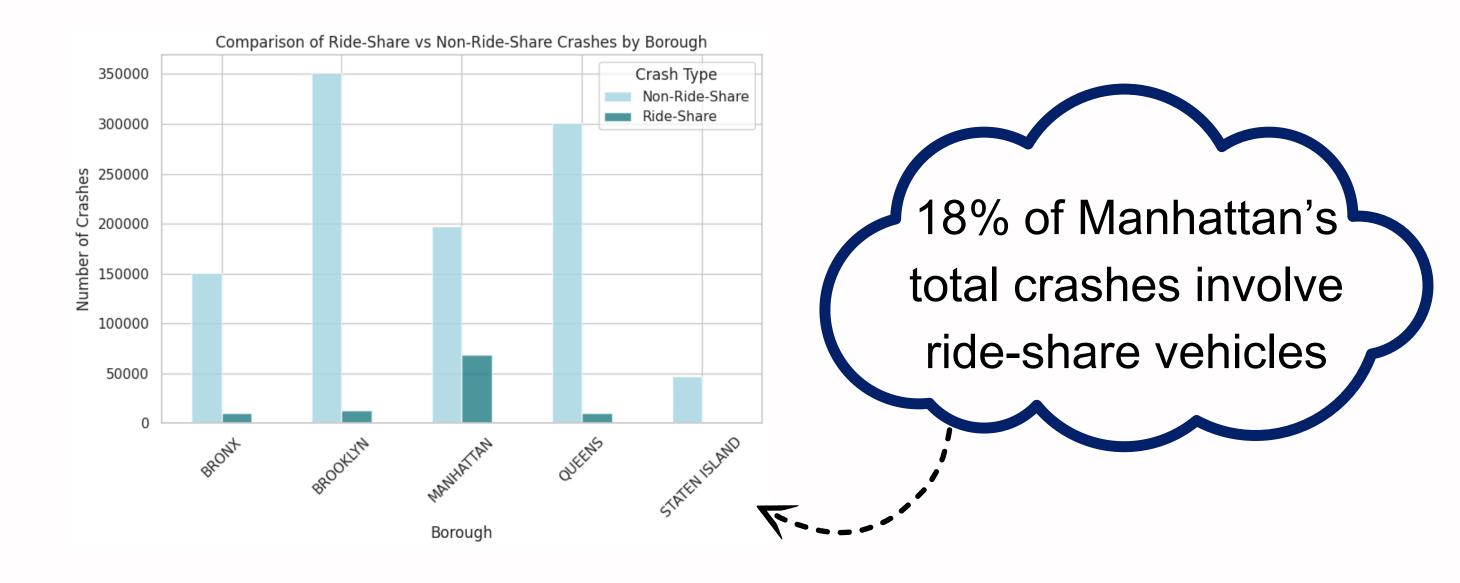


Distraction during driving is responsible for 20% of crashes whereas "Unspecified" factors 30% of crashes.

Recommendation: Enhance data collection and implement driver education programs.

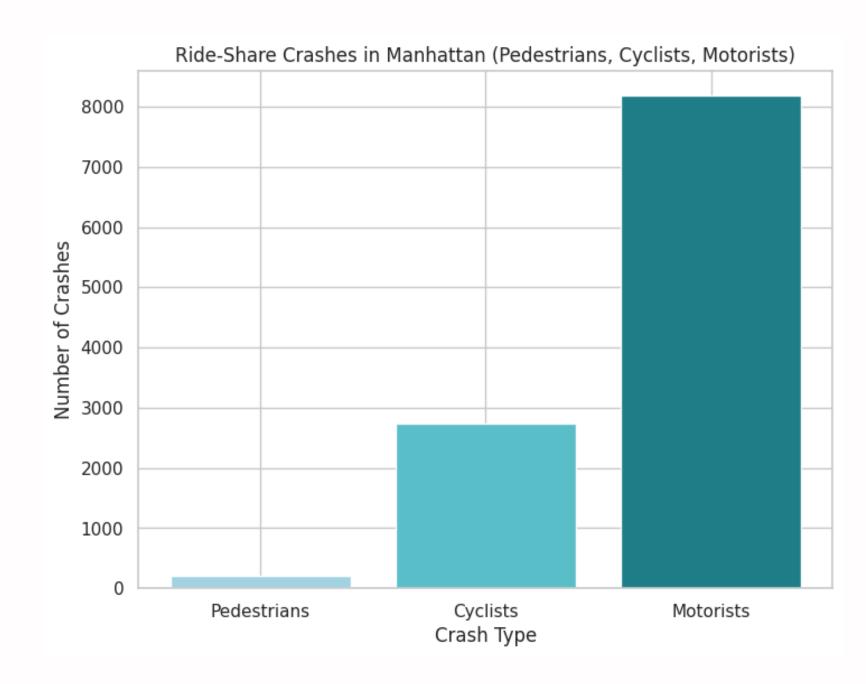
Manhattan as a hotspot!





Recommendation: Target high-crash zones and key intersections in Manhattan.

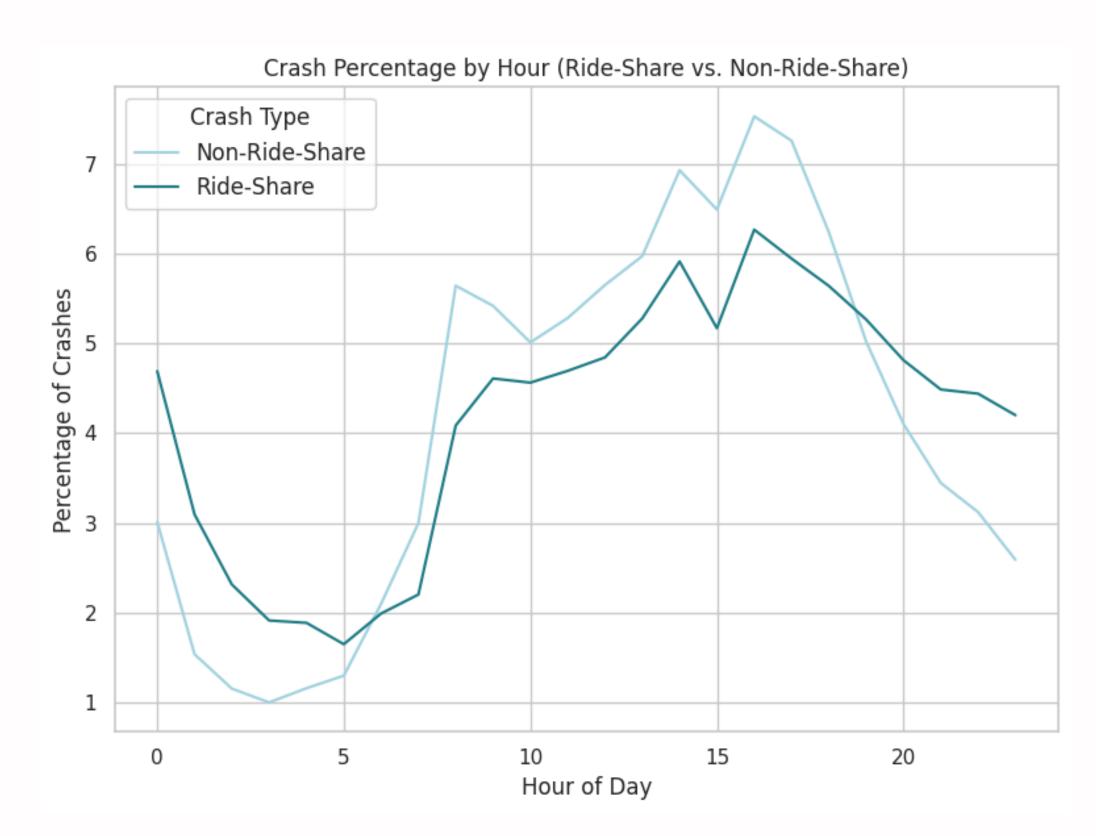
Vulnerable Road Users



Motorists make up 70% of crash victims followed by Cyclists at 20%.

Recommendation: Introduce cyclist lanes and enhance pedestrian safety measures.

Crash Severity Analysis



Peak crash hours: 3-7 PM (commuting) and 9 PM-midnight (nightlife).

Recommendation: Focus safety measures during peak hours and improve high-density infrastructure.

Future Scope

Additional research questions to be explored in future:

- Integrate real-time ride-share data with traffic monitoring systems for proactive safety measures.
- Develop predictive models to forecast high-risk periods and zones.

Acknowledgments

A huge thank you to **Northeast Big Data Innovation Hub** and the **National Student Data Corps** for organizing the **Explorer TDSP!**