San Francisco Crime Analysis

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Main Question

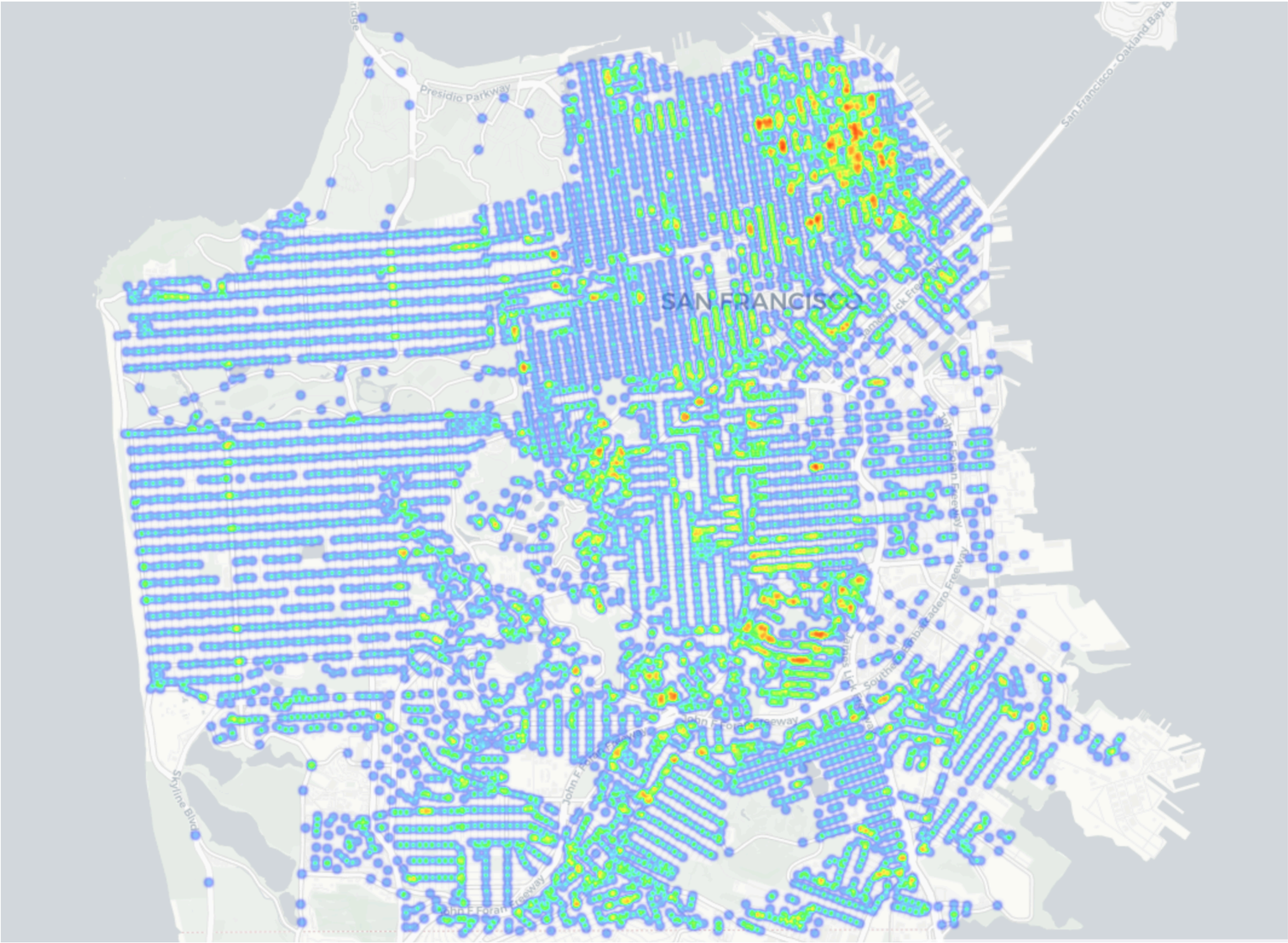
Did San Francisco become safer during the pandemic?

Goals

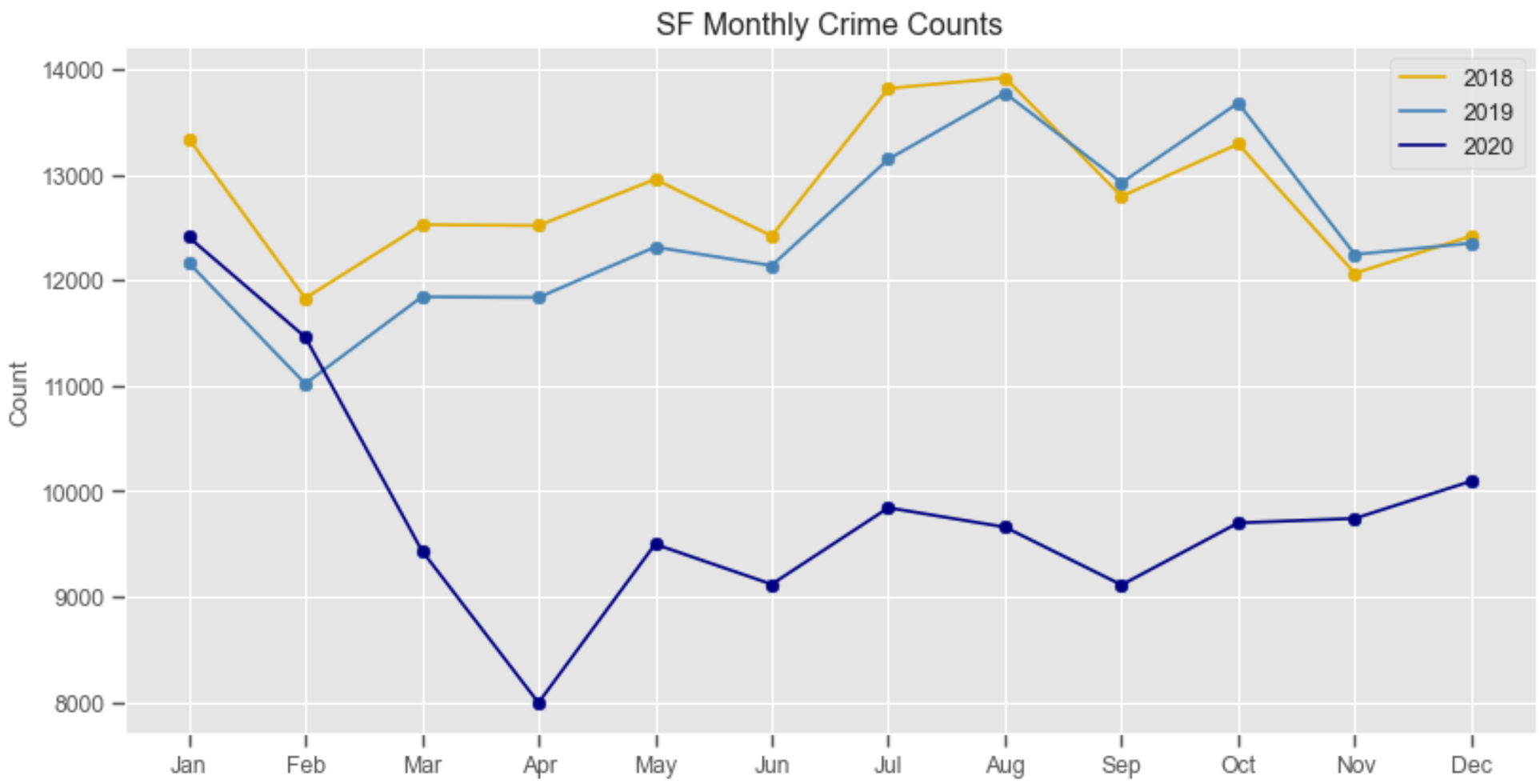
Part 1 - Answer the above question
Part 2 - Find clear patterns of crime : location and time

Data

SF Police Department Incident Reports
2018- 2019- 2020

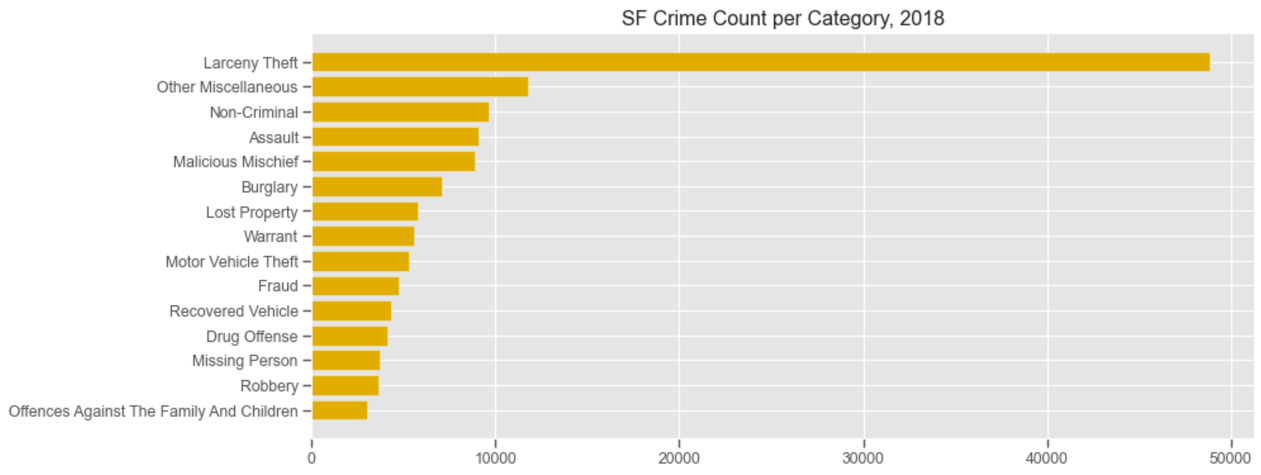


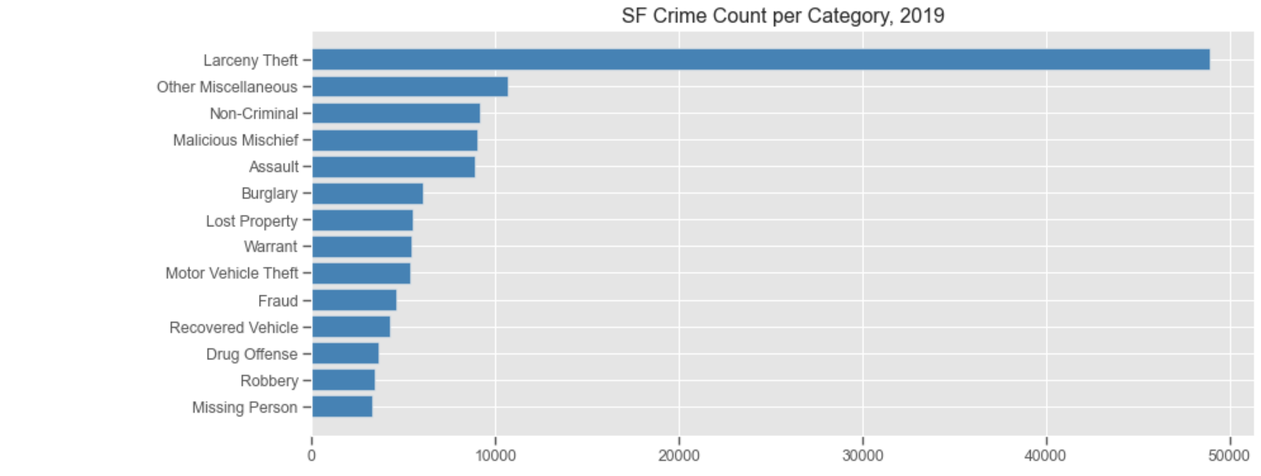
SF 2020 Crime Heat Map

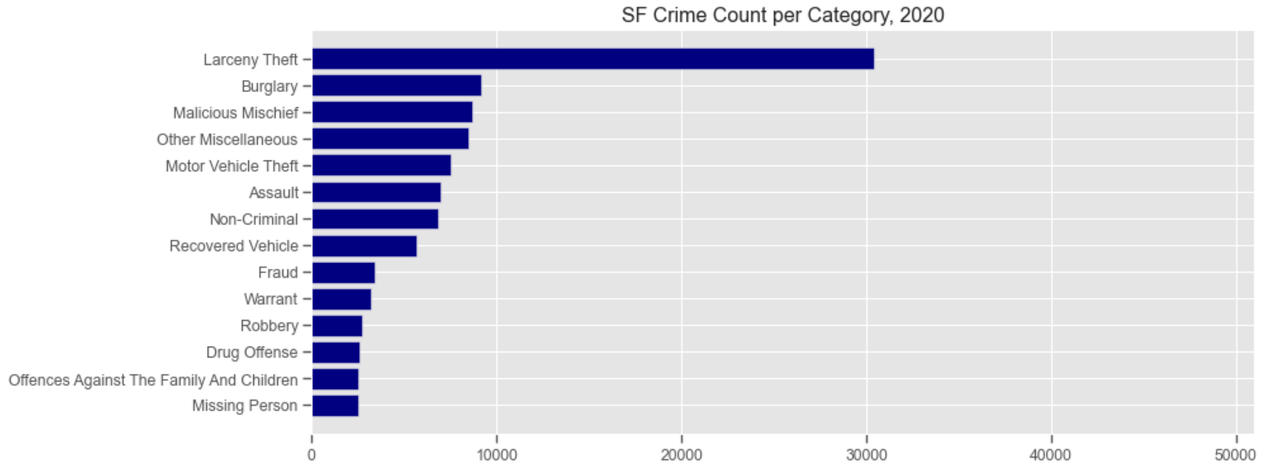


- **Shelter-in-place was ordered on March 17, 2020**
- **31,364 less reported crimes than 2019**
- **21% decrease**

- 2018 total crimes: 153,874
- 2019 total crimes: 149,411
- 2020 total crimes: 118,047







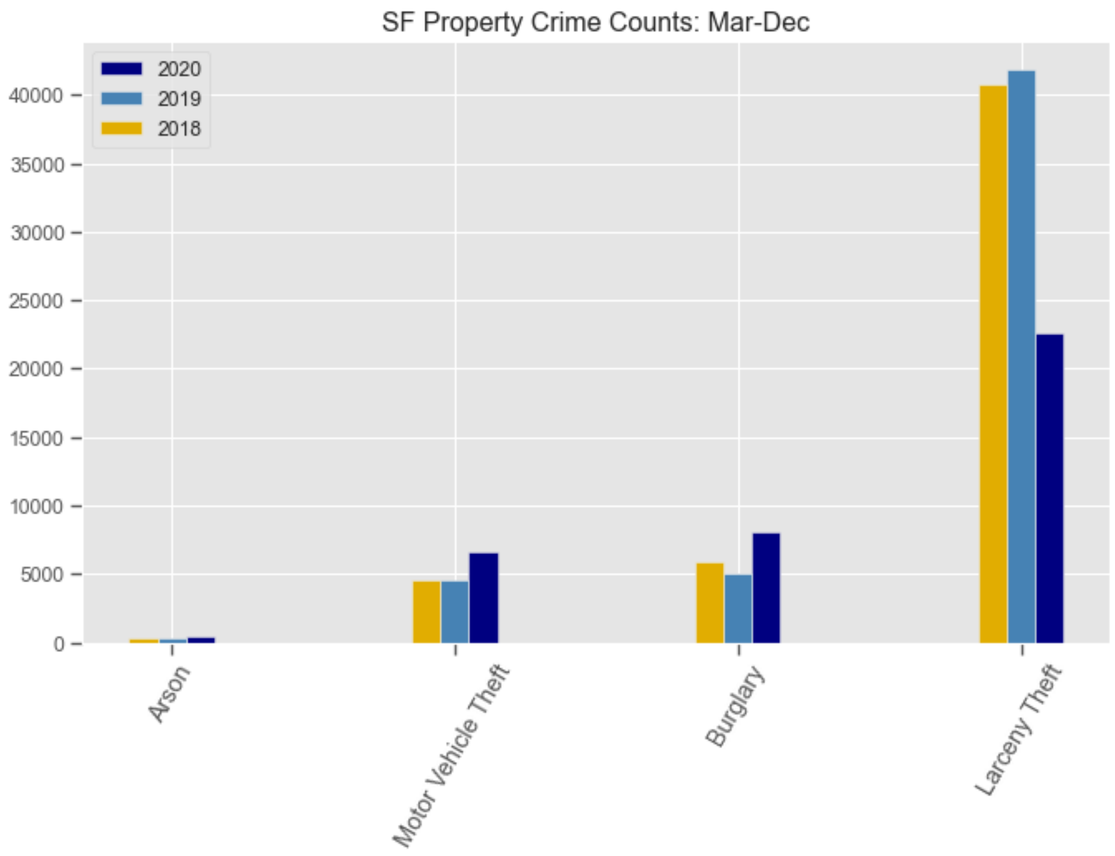
- **Larceny Theft has the biggest share of all crime counts:**

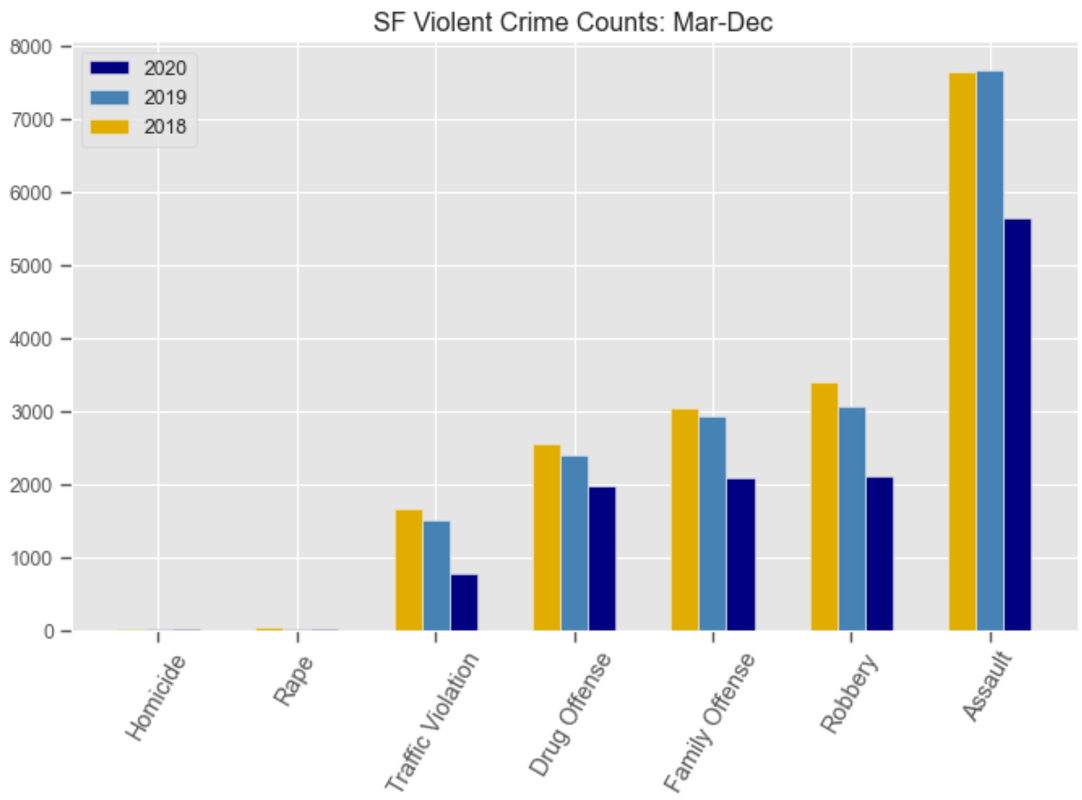
  32% in 2018
  33% in 2019

- **Larceny Theft in 2020 is 38% less than 2019 but that doesn't seem to apply to the rest of the crimes.**

- **Some crime ranks changed in 2020, burglary is 2nd!**

Larceny:
Is a crime involving the unlawful taking or theft of the personal property of another person or business.





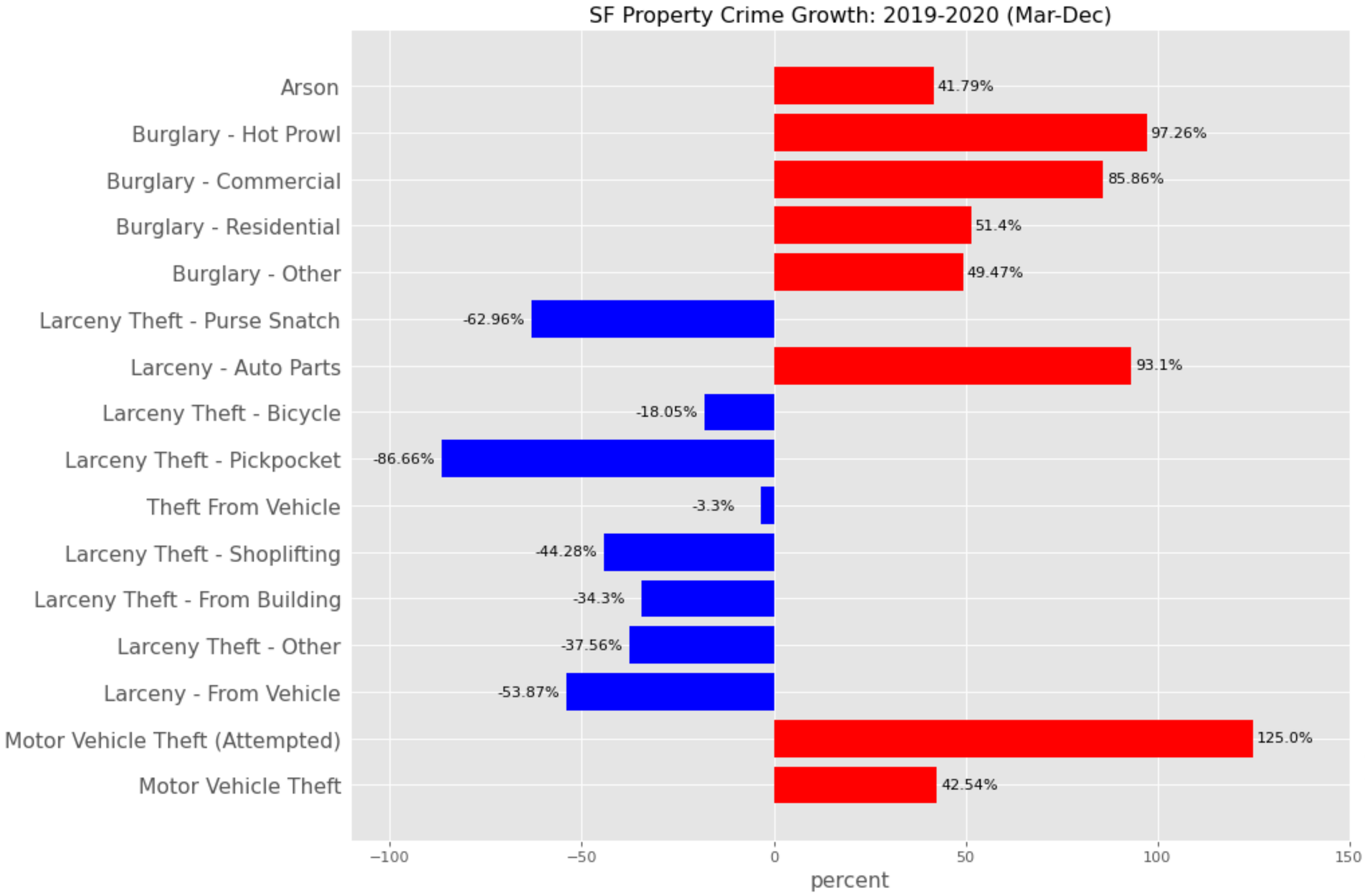
- **Some non-violent crimes have big increases:**

  60% Burglary increase
  43% Motor Vehicle Theft increase

- **All violent crimes are decreased.**

FBI Crime Classification:

- **Violent Crime:** A violent crime is a crime in which an offender or perpetrator uses or threatens to use force upon a victim.
- **Property Crime:** Property crime is a crime to obtain money, property, or some other benefit, usually involving private property.

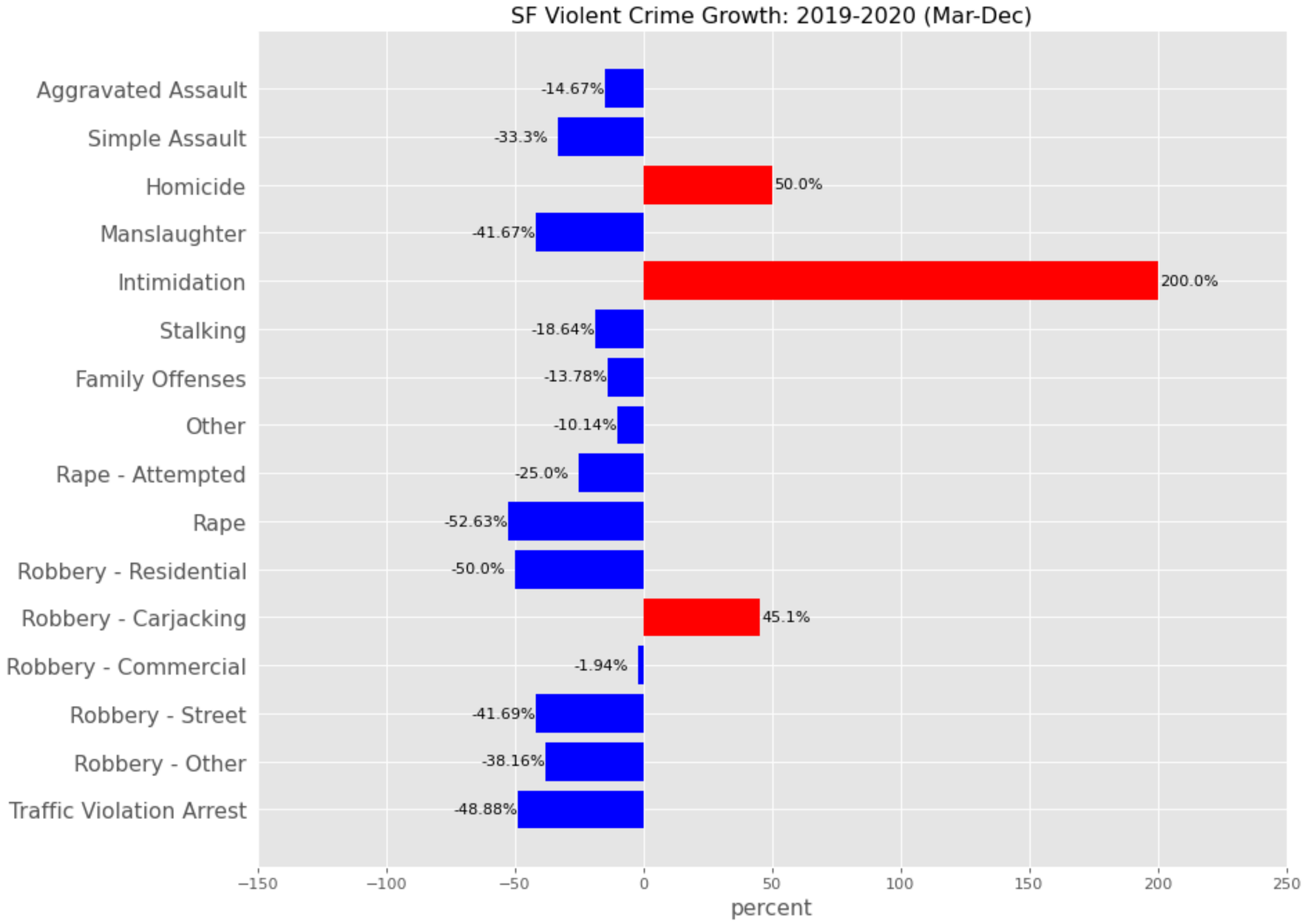


Dramatic Increase:

- All Burglary subcategories
- All vehicle related thefts

The city has become unsafe for residents, business owners and cars!

Hot Prowl: is a burglary when a subject enters, or attempts to enter your home while someone is home. A hot prowl burglary is **dangerous** because of the possible confrontation between the subject and victim.



Dramatic Increase:

- Carjacking

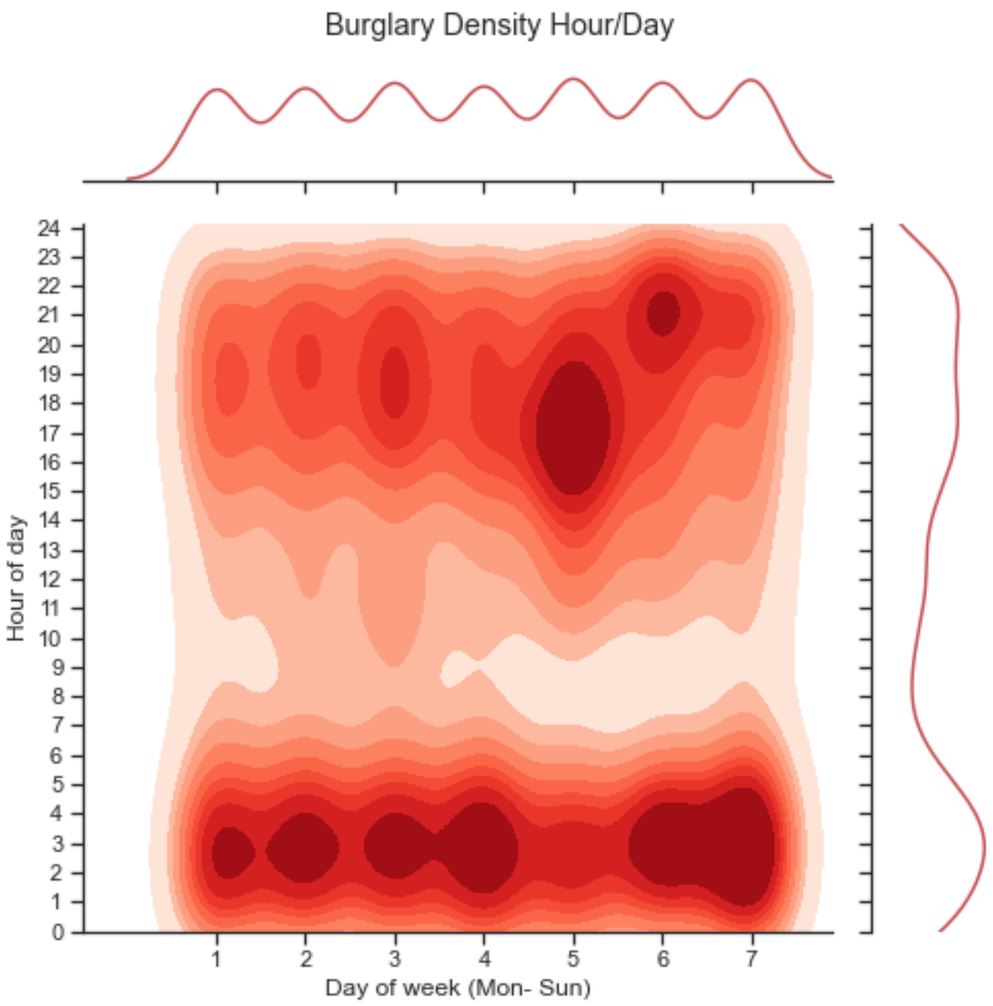
Dramatic Decrease:

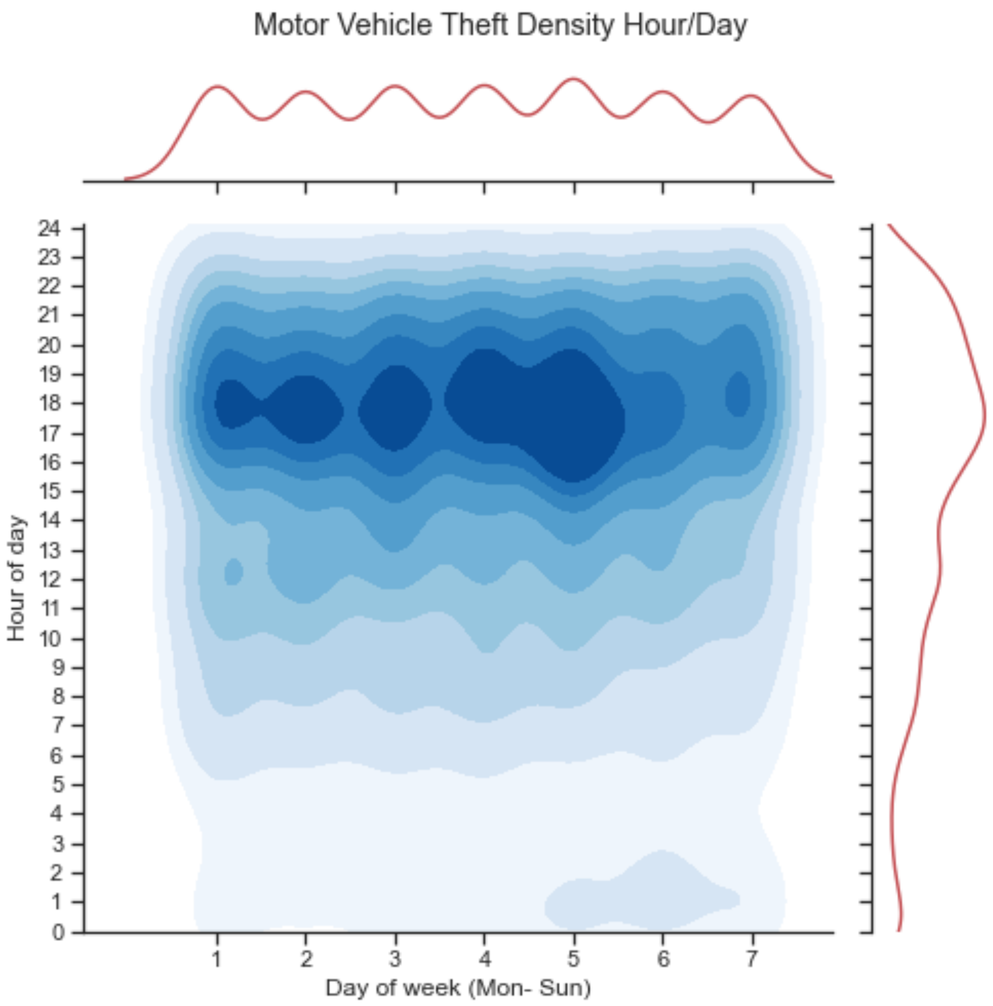
- Rape
- Stalking
- Robbery(street)
- Traffic Violation Arrest
- Assault
- Manslaughter

The city has become safer for pedestrians!

Crime Patterns

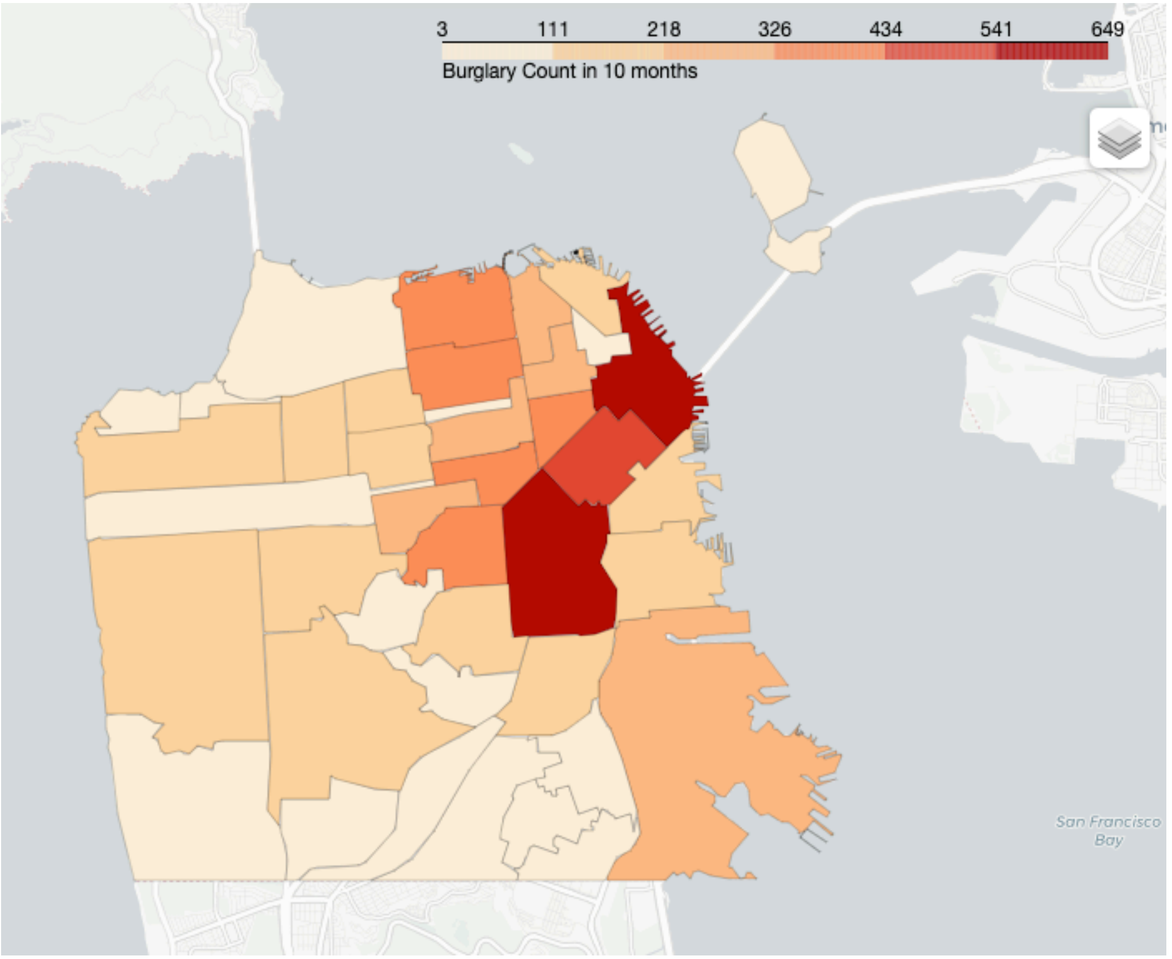
Burglary & Auto Theft



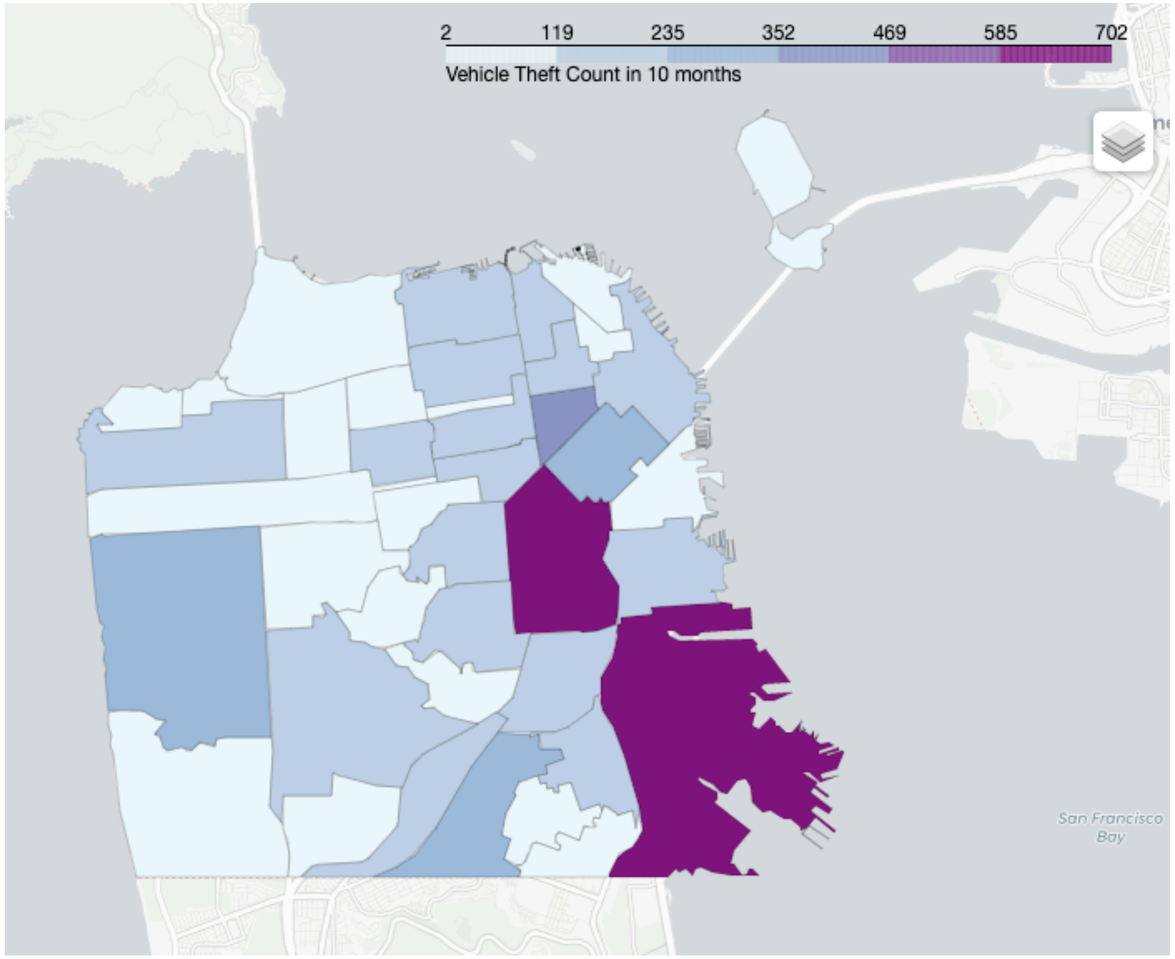


- **Peak :**Late Night and Early Morning Except for Fridays

- **Peak :** Evenings, Especially Fridays

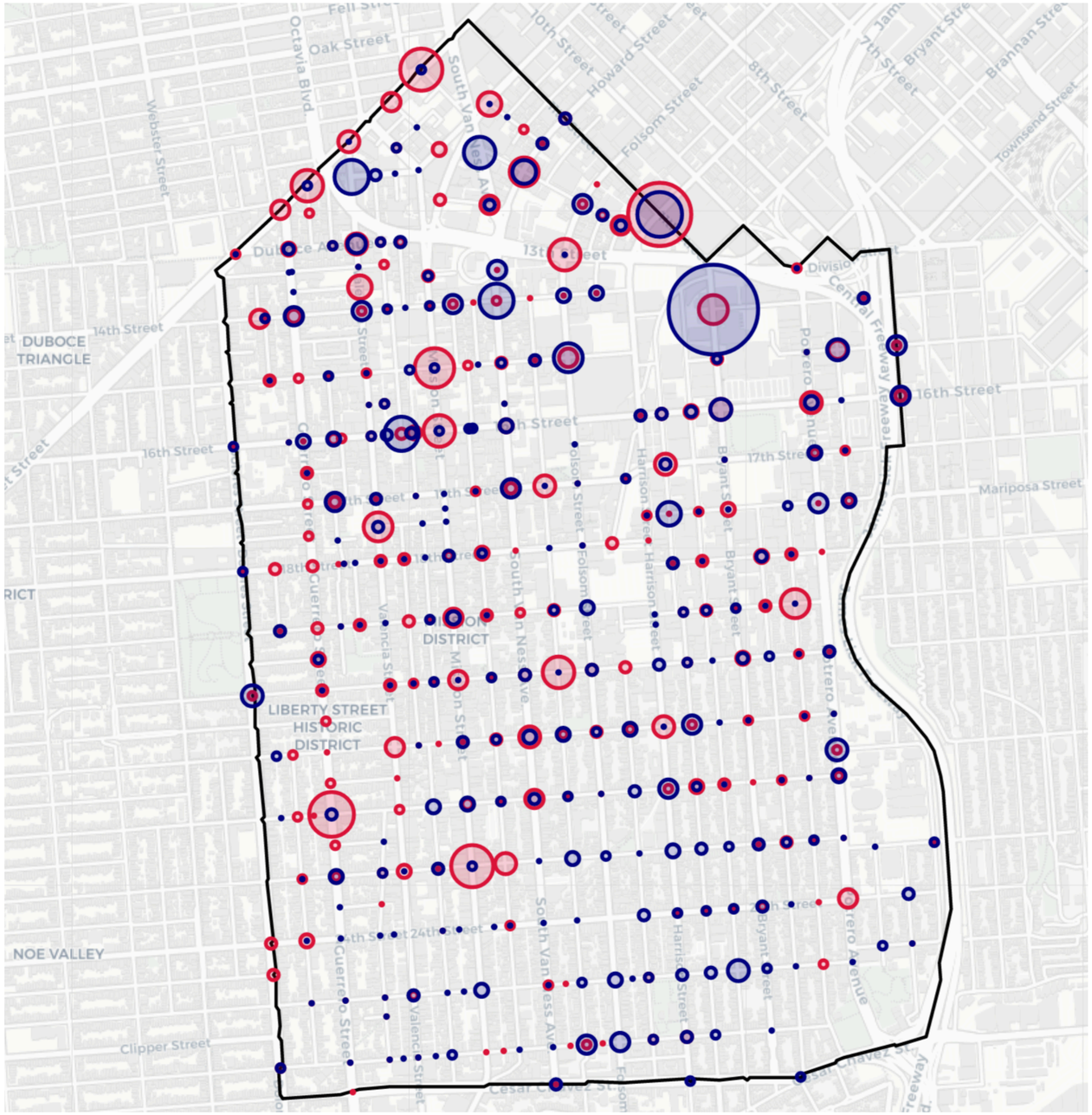


Choropleth map - Burglary rate per neighborhood - (Mar 2020- Dec 2020)



Choropleth map - Vehicle Theft rate per neighborhood - (Mar 2020- Dec 2020)

Mission is one of the neighborhoods with high rate in both of the crime types.



Blue Bubble = Vehicle Theft Node
Red Circle = Burglary Node

Radius ~ Crime Count

Mission Neighborhood - Burglary and Vehicle Theft Nodes , March- Dec 2020

Conclusion:

1- Depending on the user, San Francisco could have become safer or more dangerous.
2- There are clear patterns of crime, with concentrations in specific times.

Looking at those patterns can help predict and identify crime hot spots and guide authorities to implement solutions to make the space safer.

Further Analysis:

1- Are all the violent crimes reported?
2- Is the financial impact of each crime higher? Are thieves after bigger bites?
3- Tracking crime hotspots throughout time. Can we predict the future hotspots?