

Analyzing Parking Violations in Bonn, Germany: Trends, Patterns, and Insights

AMSE/SAKI

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Summary

- This project explores the Warnings and fines for stationary traffic (parking violations) for the years 2020 and 2021 for the city Bonn in the state North Rhine-Westphalia of Germany.
- By analyzing specific locations, days, hours, and overall fine amounts, we can gain valuable information to enhance parking management strategies and optimize enforcement efforts.

Data sources used

- Data Source 1: Verwarn- und Bußgelder ruhender Verkehr (Parkverstöße) 2020 (Mobilithek)
 - CSV file
 - Data set contains the warnings and fines (knolls/tickets) issued for parking violations in 2020.
 - Preprocessing required for some column names and replacing data errors.

	TATTAG	TATZEIT	TATORT	TATBESTANDBE_TBNR	GELDBUSSE	BEZEICHNUNG
0	01.01.2020	100	Alte Schulstr. 56 (Stichstr.)	112404	30	PKW
1	01.01.2020	1606	Bonn, Lyngsbergstraße 108	112293	15	PKW
2	01.01.2020	1505	Bonn, Münsterstraße gegenüber Hnr. 1a/3	142278	35	PKW
3	01.01.2020	1606	Bonn, Siemensstraße Parkplatz Sirius	329610	60	PKW
4	01.01.2020	1645	Bonn, Weiherstr. 29	142252	10	PKW
5	01.01.2020	1300	Bonn, Weiherstraße 27	142252	10	PKW

Data sources used

- Data Source 2: Verwarn- und Bußgelder ruhender Verkehr (Parkverstöße) 2021 (Mobilithek)
 - CSV file
 - Data set contains the warnings and fines (knolls/tickets) issued for parking violations in 2021.
 - Preprocessing required for some column names and replacing data errors.

	TATTAG	TATZEIT	TATORT	TATBESTANDBE_TBNR	GELDBUSSE	BEZEICHNUNG
0	01.01.2021	1137	Bonn, Görlitzer Straße gegenüber Laterne3	141312	15	PKW
1	01.01.2021	1131	Bonn, Marienburger Straße gegenüber Laterne1	112402	20	PKW
2	01.01.2021	1118	Bonn, Memelweg gegenüber Hnr. 4	112402	0	Kleintransporter (unter 3,5 t zGG)
3	01.01.2021	1120	Bonn, Memelweg gegenüber von Laterne 4	112402	20	PKW
4	01.01.2021	1119	Bonn, Memelweg Wendefläche	112402	20	PKW
5	01.01.2021	1120	Bonn, Memelweg Wendefläche	112402	20	PKW

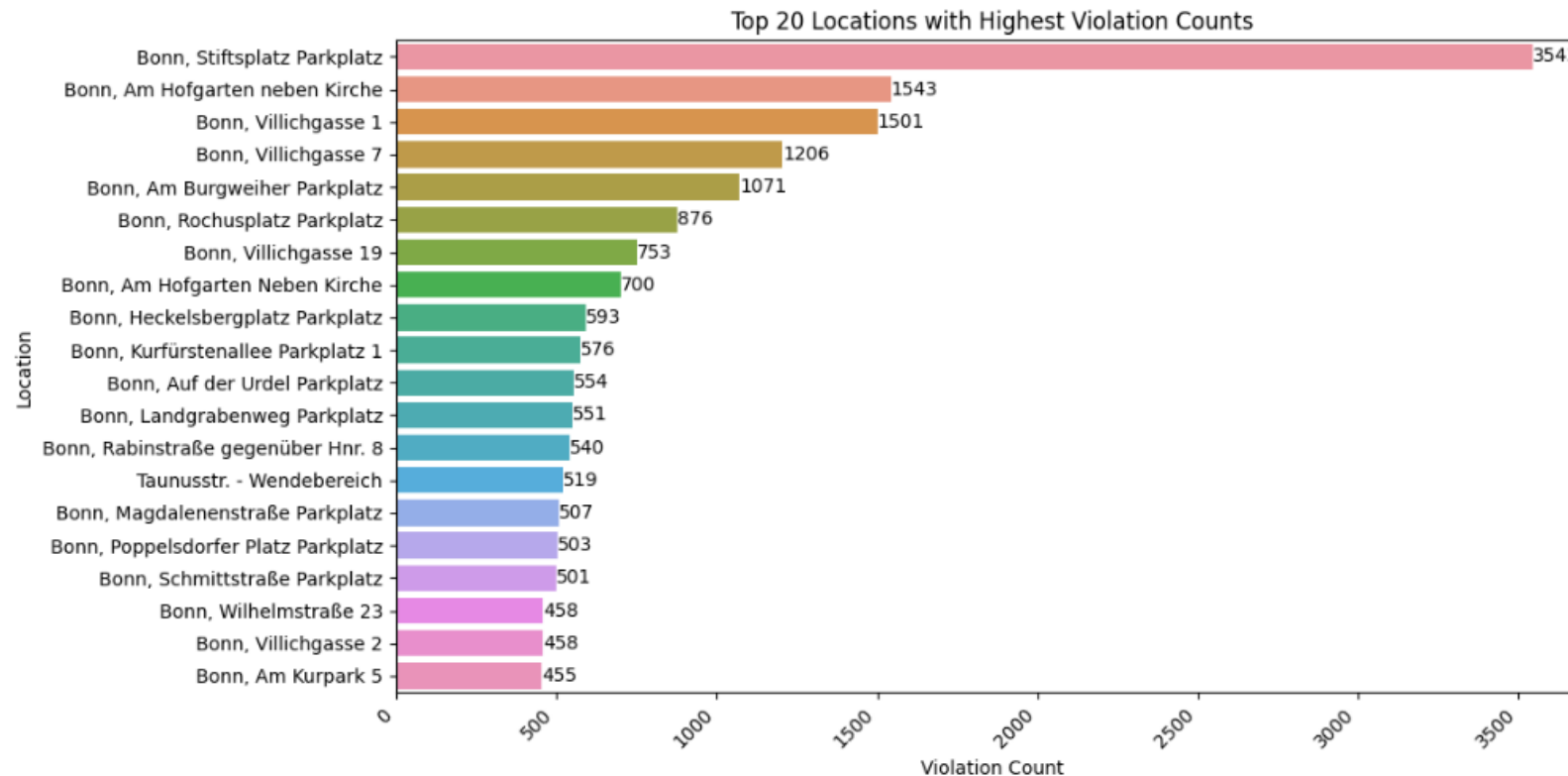
Questions to be answered

- Are there any specific locations or areas where parking violations are more frequent in 2020 and 2021 together?
- Are there certain days or hours of the week when parking violations are more common?
- Is there an increase in the overall amount of parking fines?

Results for Question 1

- Are there any specific locations or areas where parking violations are more frequent in 2020 and 2021 together?

As per below visualization, **Bonn, Stiftsplatz Parkplatz** seems to be the location with the **highest** violation count with **3543** violations



Results for Question 2

- Are there certain days or hours of the week when parking violations are more common?
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For 2020:

the most common Month for parking violations is January,
the most common Day is Thursday,
the most common Hour is 11:00 - 12:00.

For 2021:

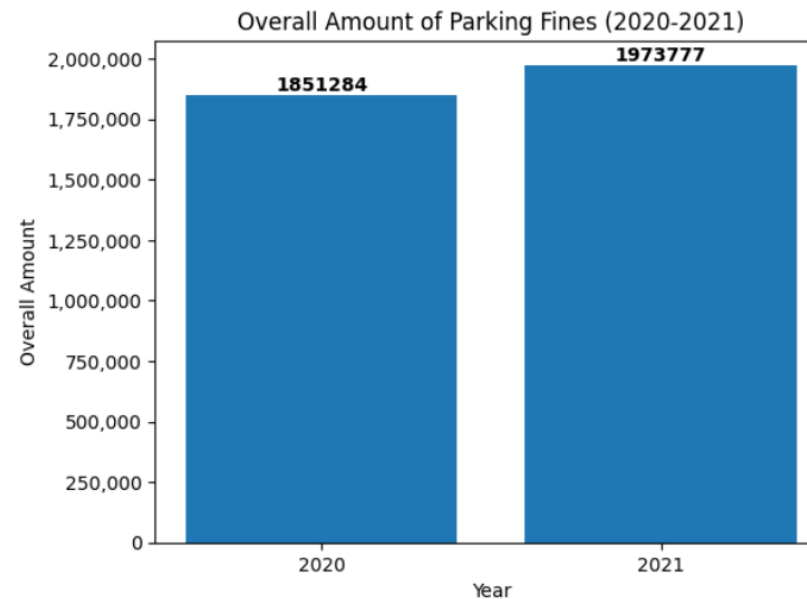
the most common Month for parking violations is September,
the most common Day is Thursday,
the most common Hour is 10:00 - 11:00.

Results for Question 3

- Is there an increase in the overall amount of parking fines?

In **2020**, the total amount of parking fines collected was **€1,851,284**. This indicates the cumulative sum of all the fines issued for parking violations in the city during that year.

In **2021**, the total amount of parking fines significantly increased to **€19,737,777**. This suggests a **substantial rise** in the fine amounts collected compared to the previous year.



Interpretations

- Increase in fines suggests a need for **enhanced enforcement** or **public awareness campaigns**, aiding effective parking management strategies.
- Parking violation analysis identifies high-frequency zones for targeted enforcement, optimizing resource allocation.

Thank you for your attention!

Any Questions?
