
Free Weather API


travel.stackexchange.com

Najczęściej używane słowa!?

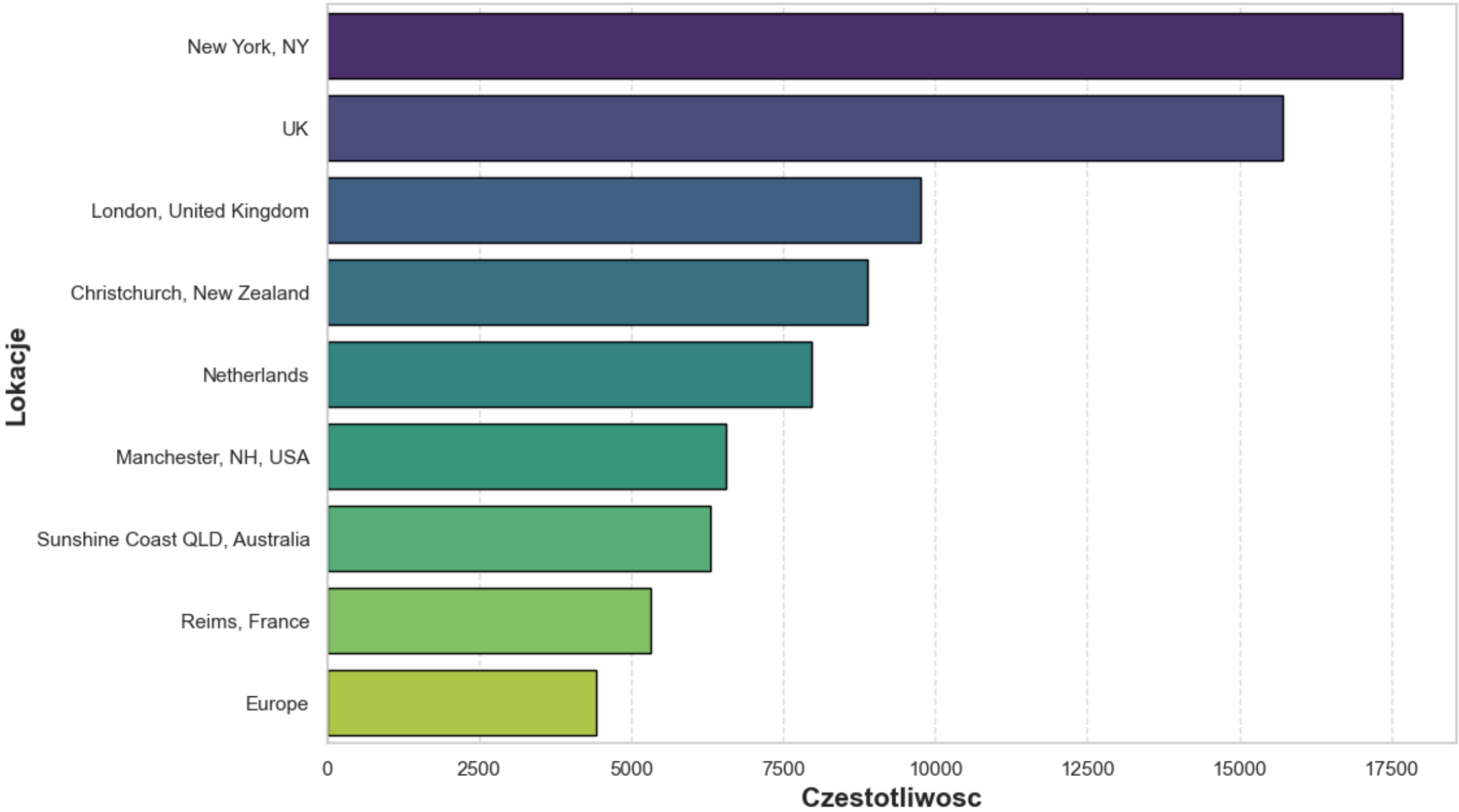
Preferowane destynacje użytkowników!?

Czy piszą o pogodzie!?

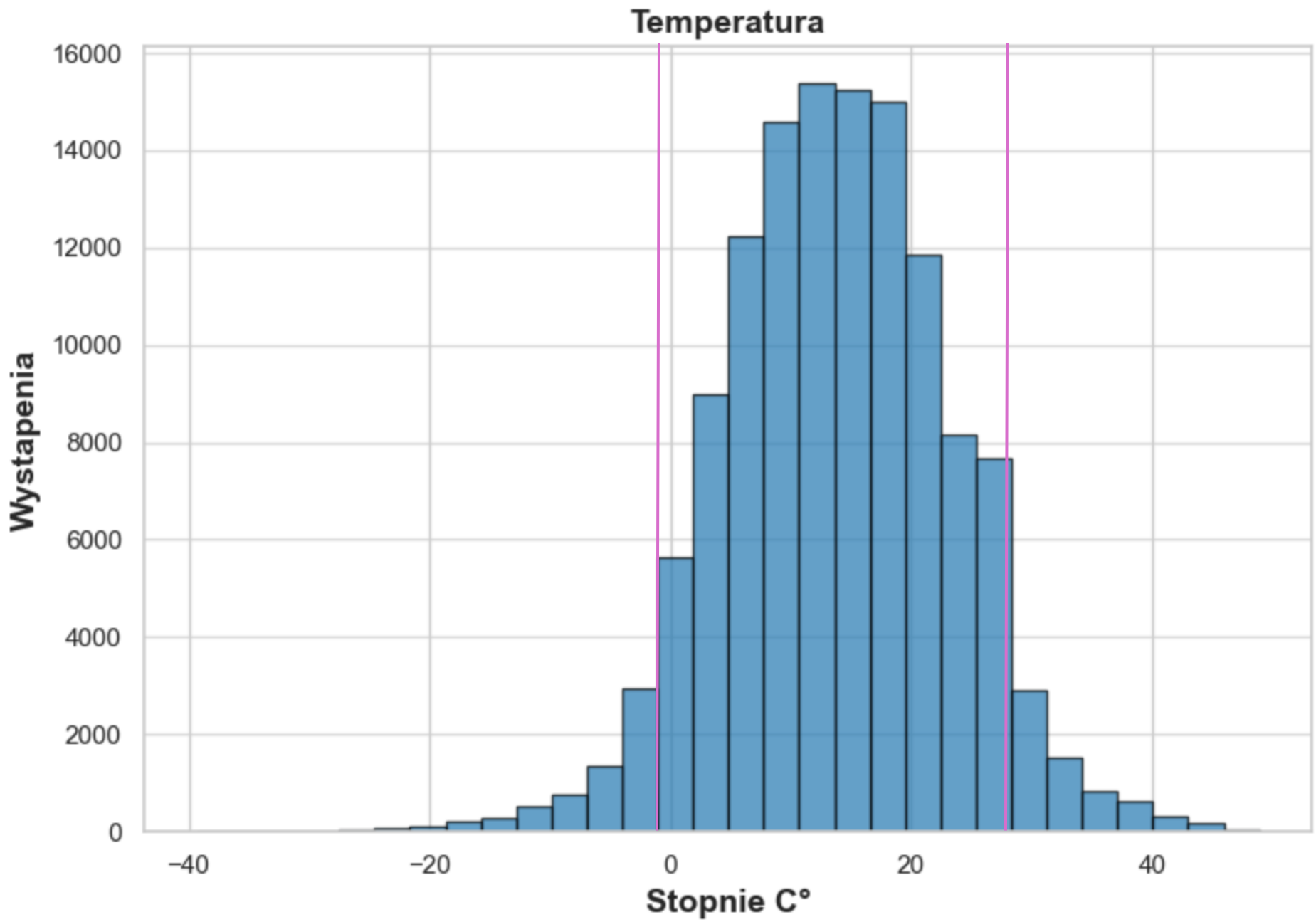
- Połączymy pogodę z postami
- Podzielimy posty na grupy w zależności od pogody
- Zrobimy obróbkę danych tekstowych
- Zrobimy i przeanalizujemy wykresy

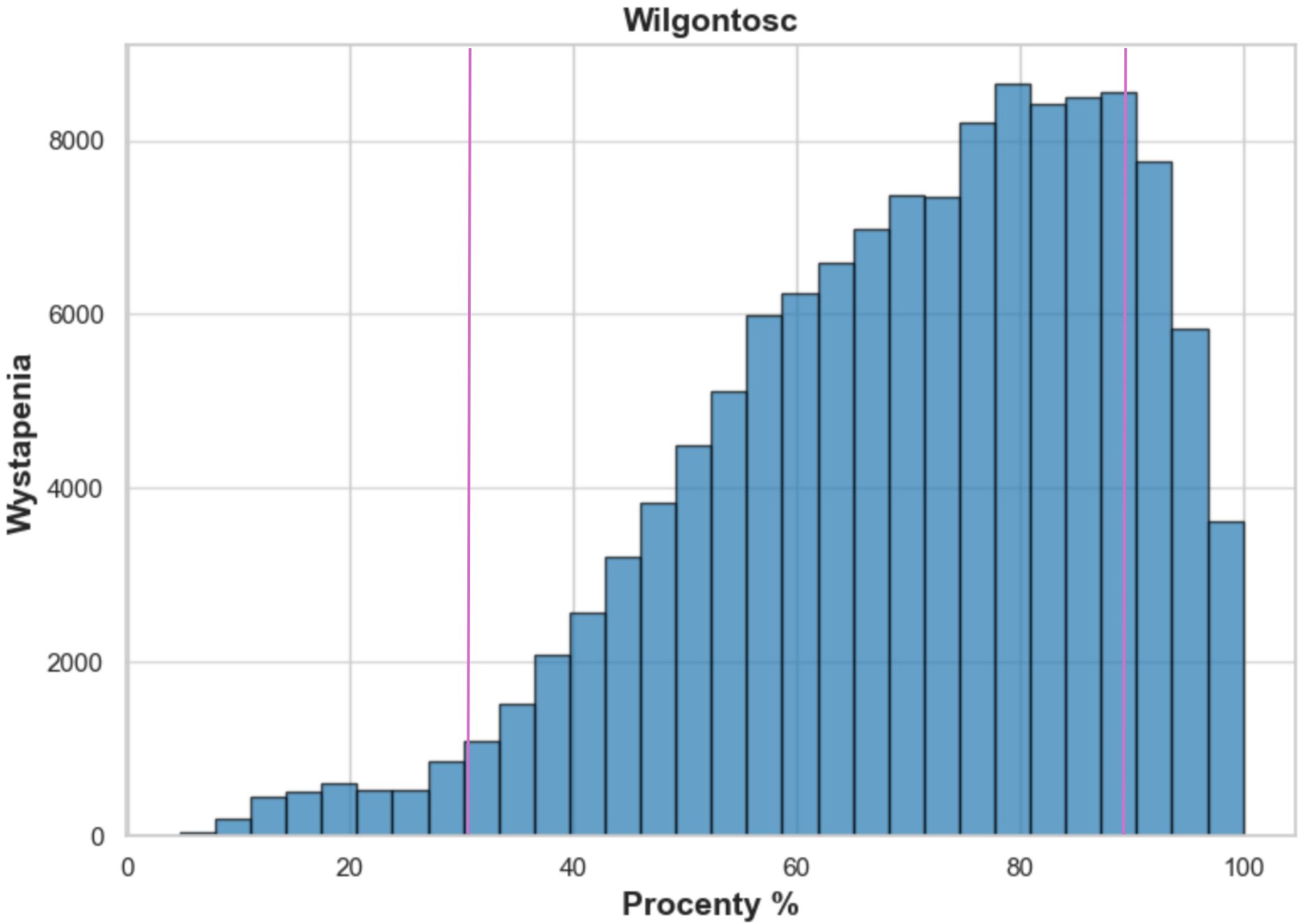
Łączymy Dane

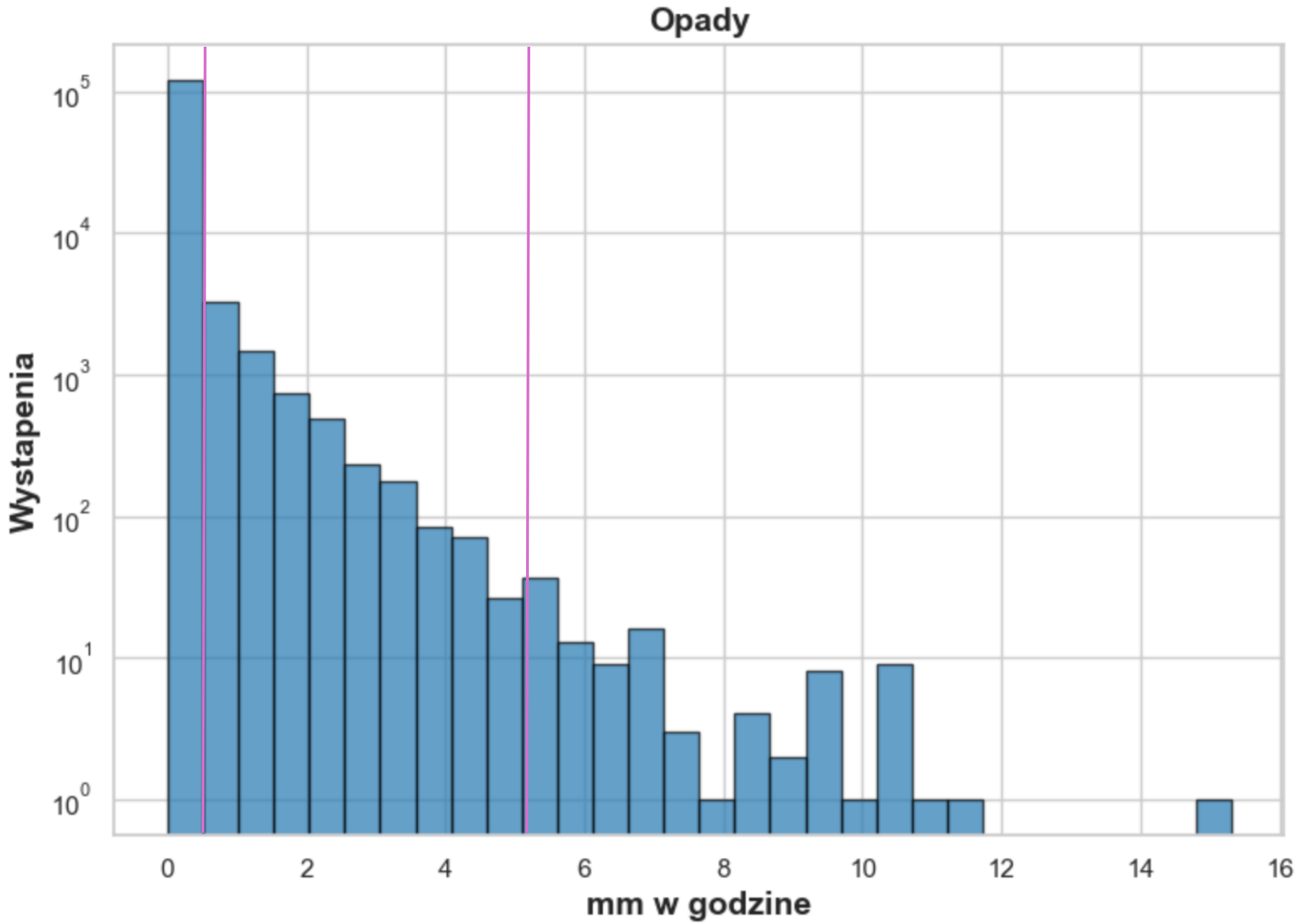
CreationDate_posts	Body	Title	Tags	Location
2011-06-21T20:19:34.730	<p>My fiancée and I are looking for a good Car...	What are some Caribbean cruises for October?	<caribbean><cruising><vacations>	Toronto, Canada

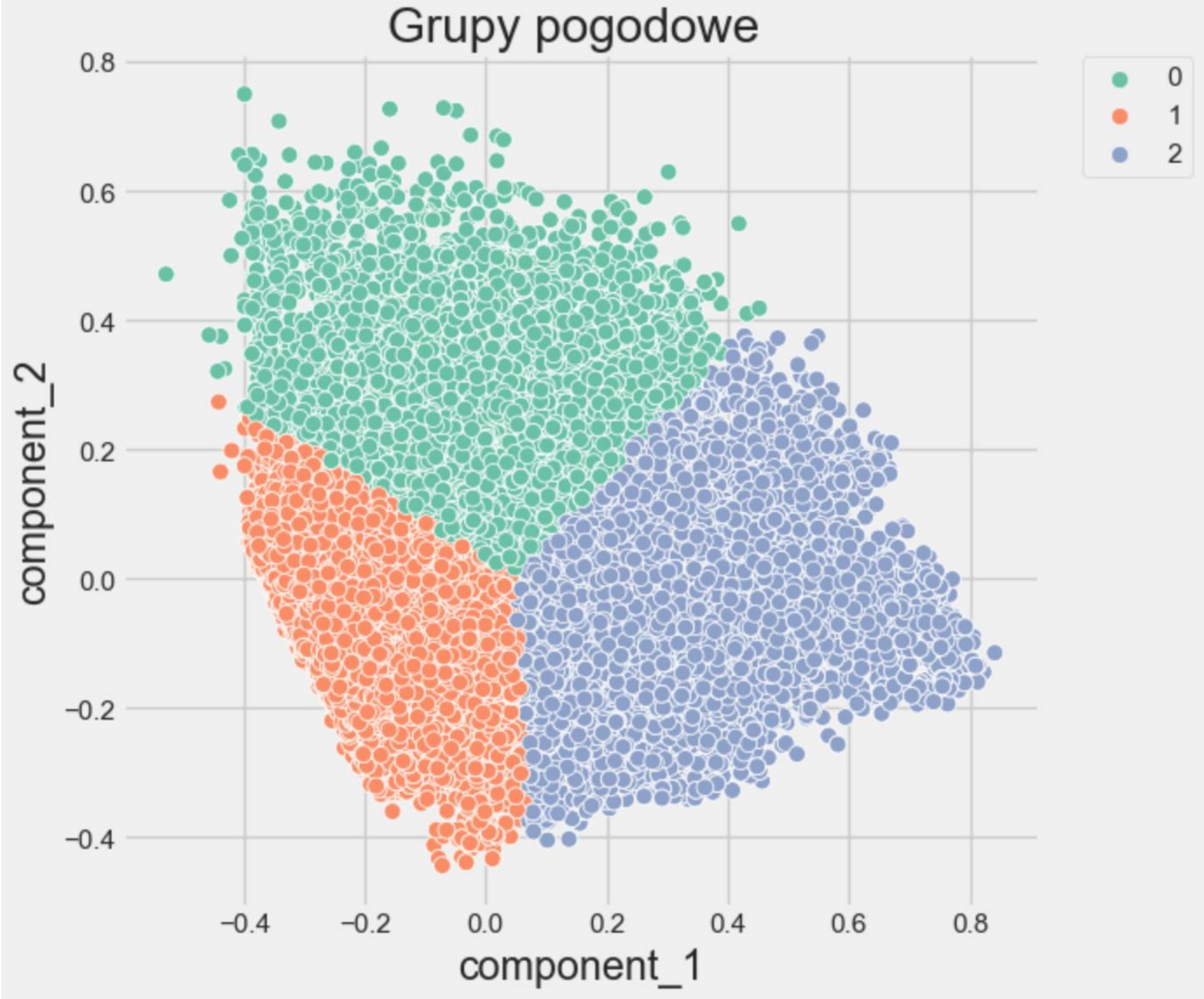

New York, NY
UK
London, United Kingdom
Christchurch, New Zealand
Netherlands
Manchester, NH, USA
Sunshine Coast QLD, Australia
Reims, France
Europe
Lokacje
0
2500
5000
7500
10000
12500
15000
17500
Czestotliwosc

Rozbijanie danych w grupy


Temperatura
Wystapenia
16000
14000
12000
10000
8000
6000
4000
2000
0
−40
−20
0
20
40
Stopnie C°


Wilgontosc
Wystapenia
8000
6000
4000
2000
0
0
20
40
60
80
100
Procenty %


Opady
Wystapenia
10^5
10^4
10^3
10^2
10^1
10^0
0
2
4
6
8
10
12
14
16
mm w godzine


Grupy pogodowe
0
1
2
component_2
component_1
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.4
−0.2
0.0
0.2
0.4
0.6
0.8

Obróbka Tekstu

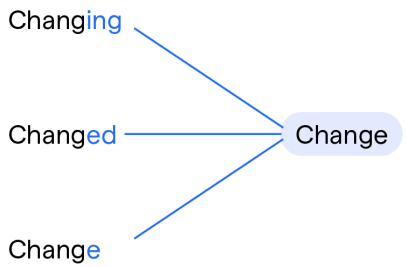
```
<p>An american software engineer living in Japan
gives a <a
href="http://www.kalzumeus.com/2011/03/13/some-
perspective-on-the-japan-earthquake/"
rel="noreferrer">good overview of how big Japan
is</a> and why you shouldn't be afraid to travel
there after the nuclear accident.</p>
<p>Essentially, the summary is that Japan is very
large. It's unlikely that your travel plans as a
tourist will be anywhere near the accident.</p>
<p>Source: <a
href="http://mapfrappe.com/index.html?show=3057" r
el="noreferrer">http://mapfrappe.com/index.html?sh
ow=3057</a><img
src="https://i.stack.imgur.com/plen2.png"
alt="enter image description here"></p>
```

```
american software engineer live japan give good
overview big japan shouldnt afraid travel nuclear
accident essentially summary japan large unlikely
travel plan tourist anywhere near accident source
```

Stop Words

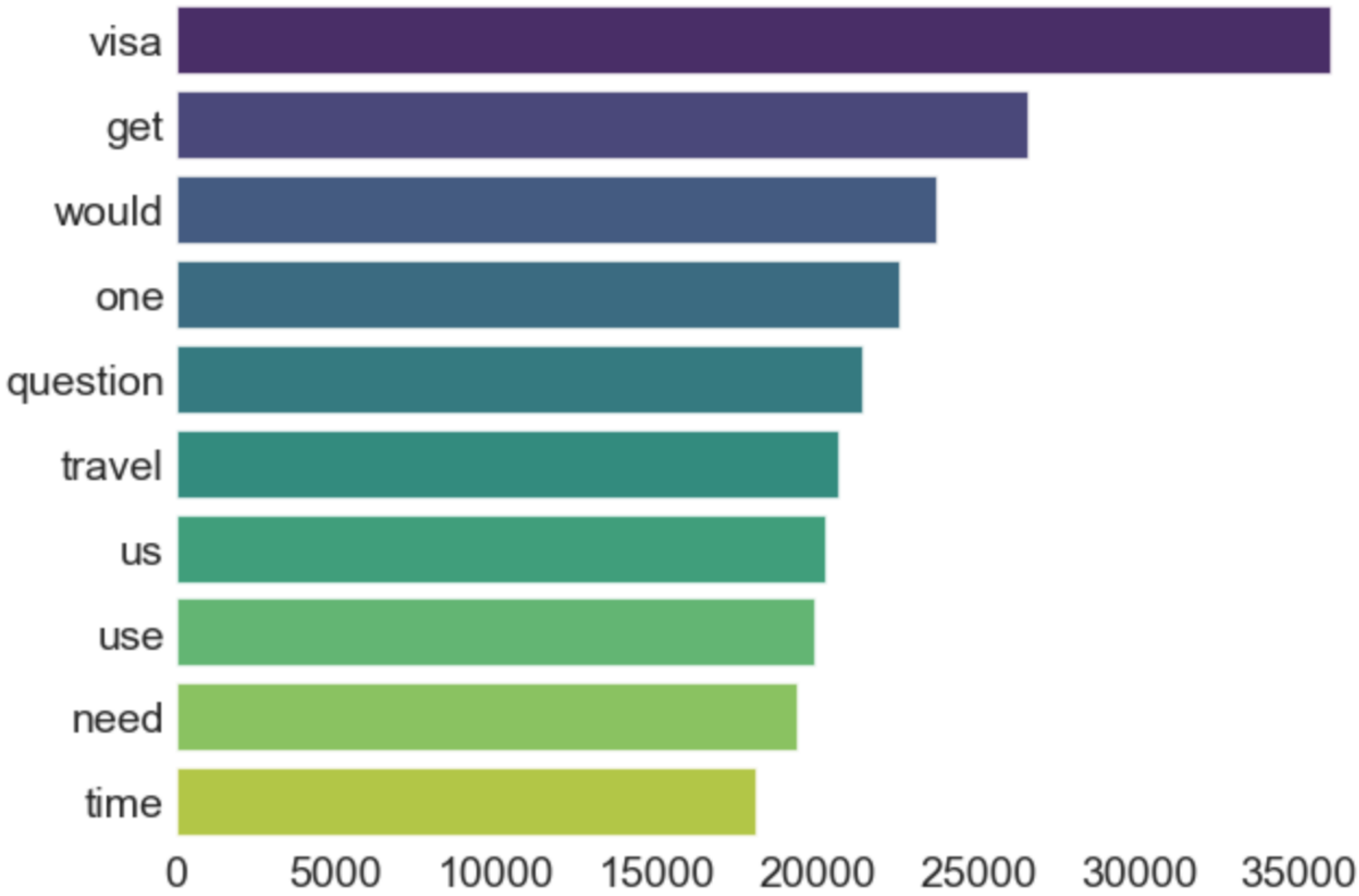
- a
- I
- the
- in
- of
- for
- at
- to
- on
- with
- from

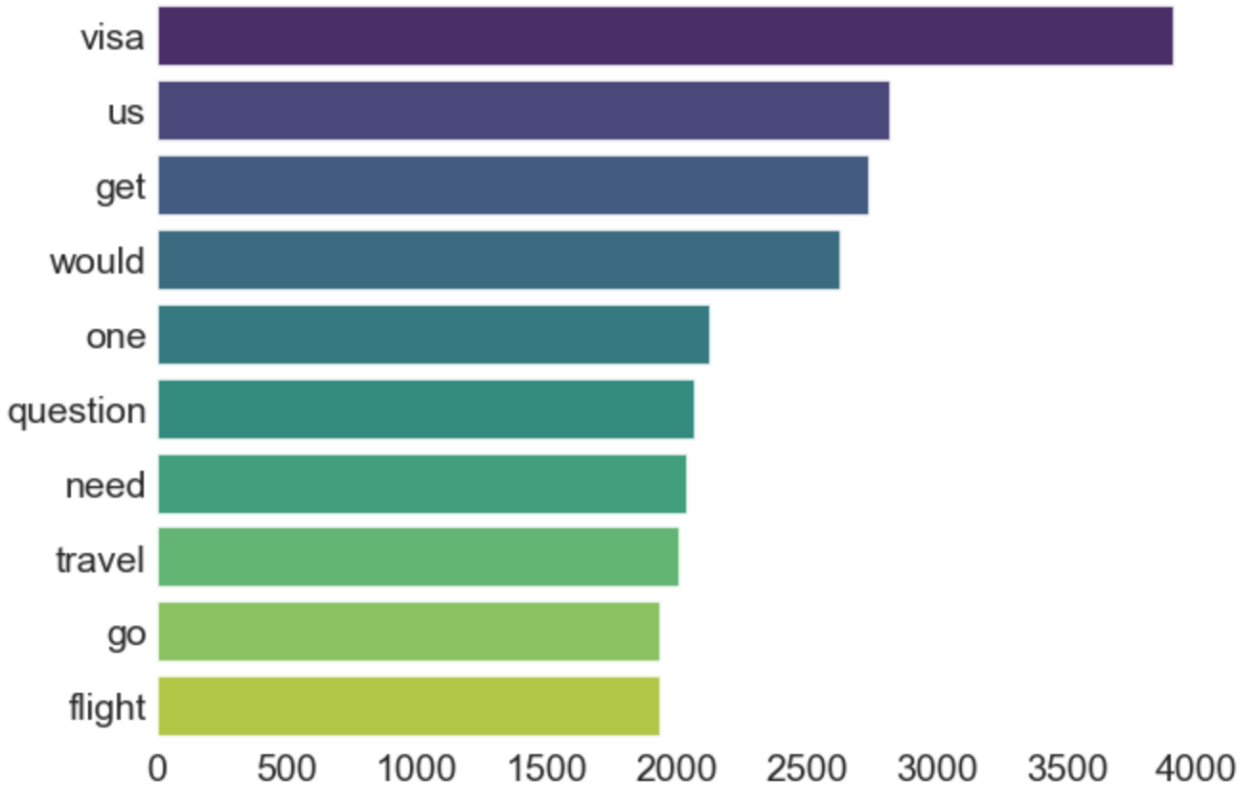
Lemmatization



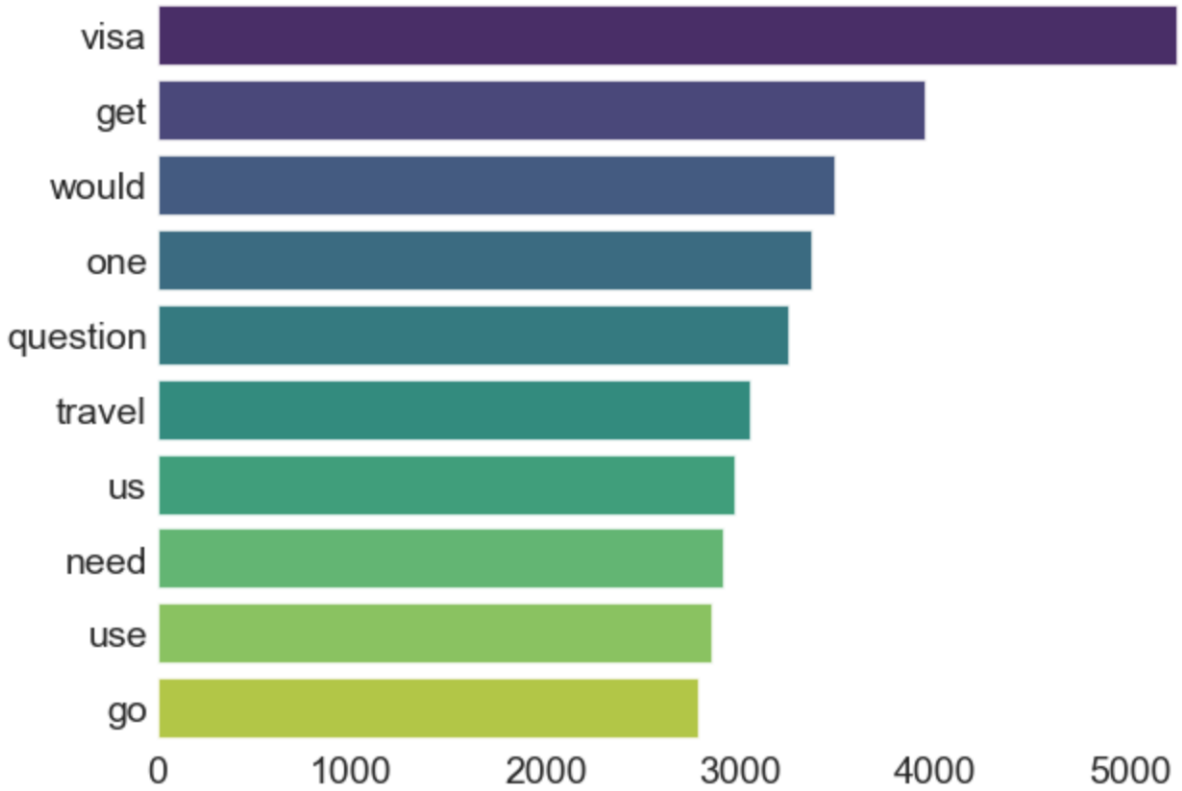
Wykresiki

Cały DataSet

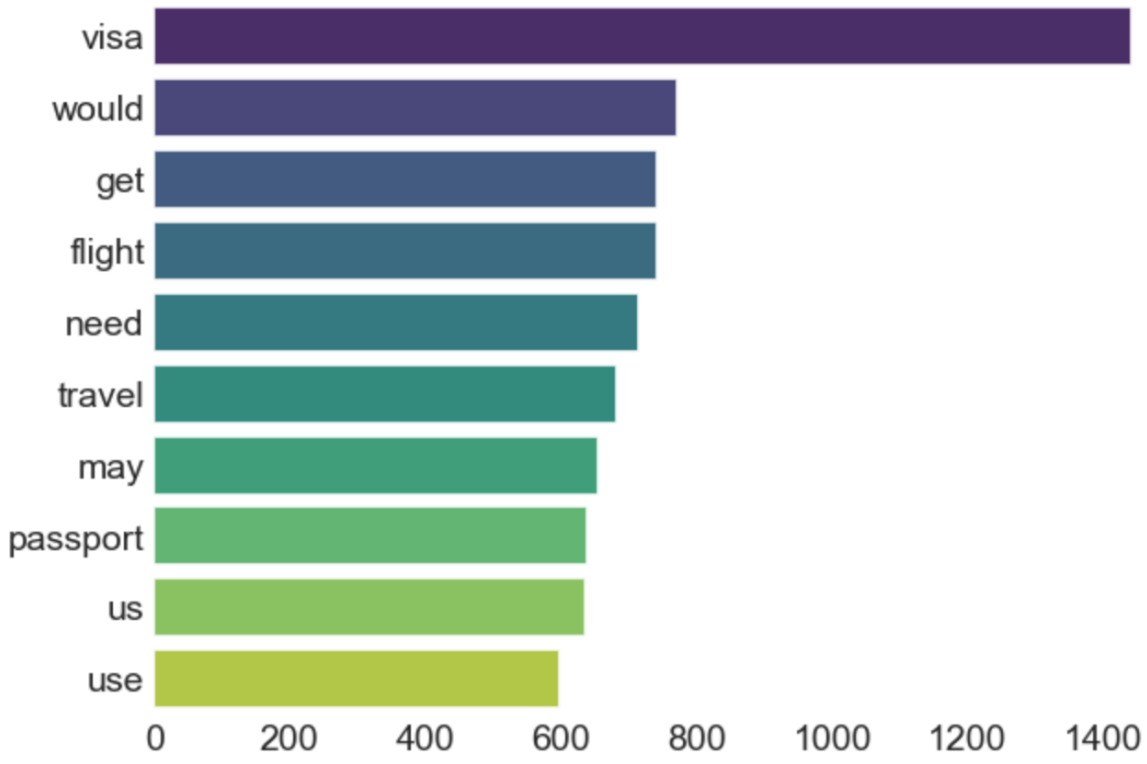




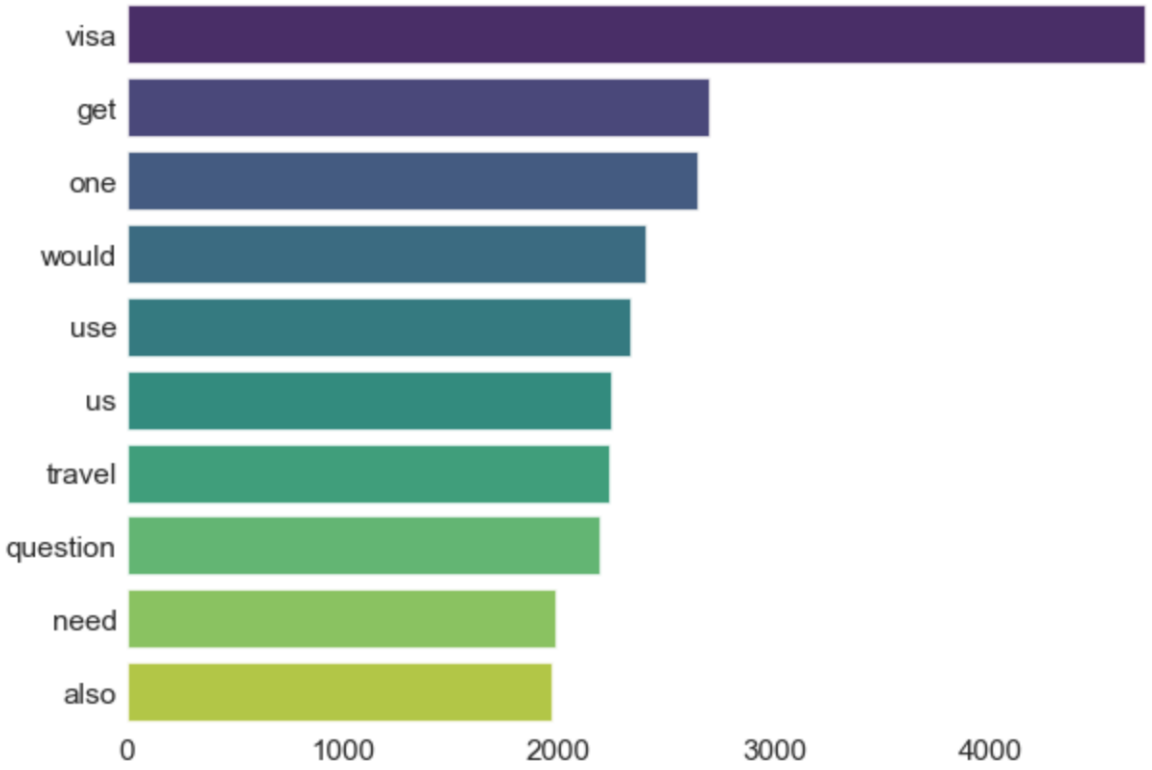
Temperatura 0



Wilgotność 90%

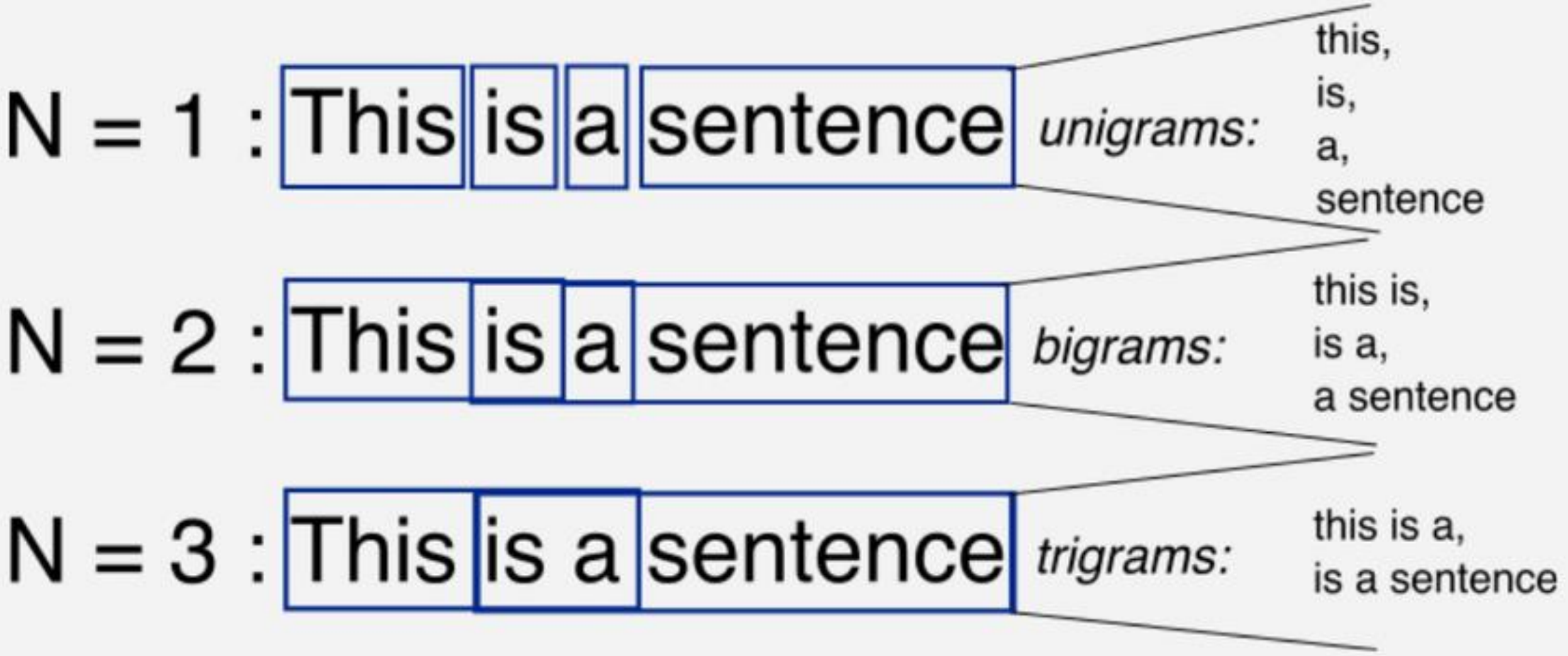


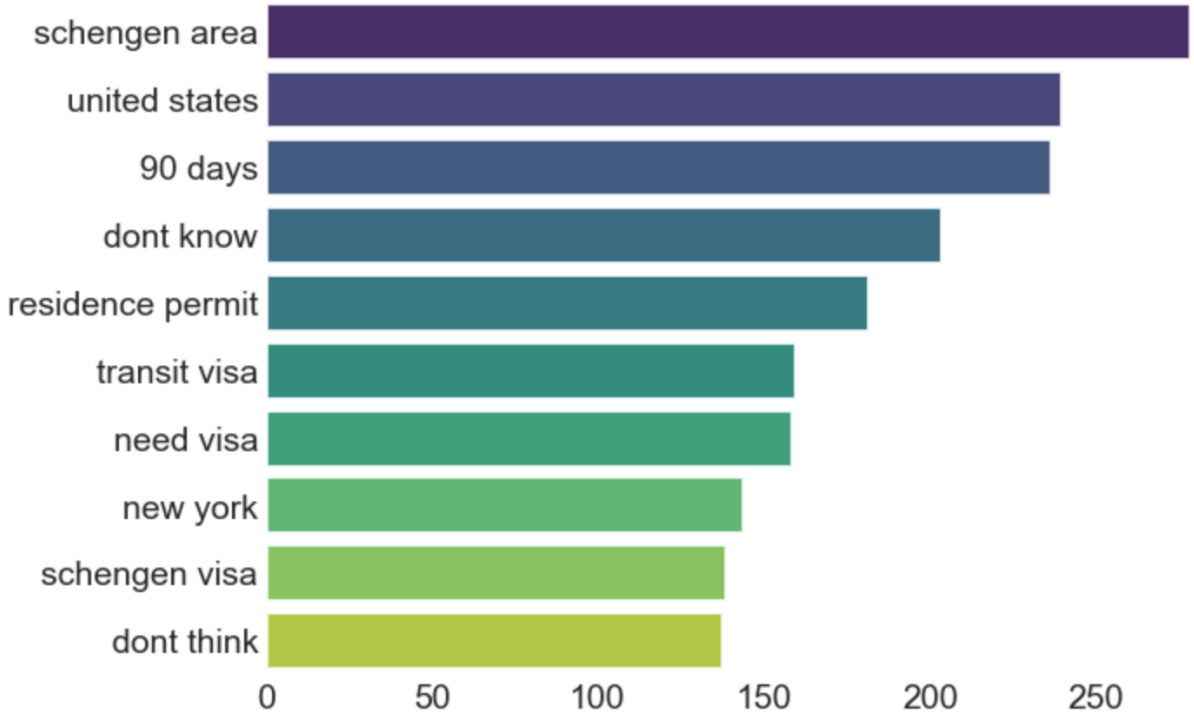
Wilgotność 30



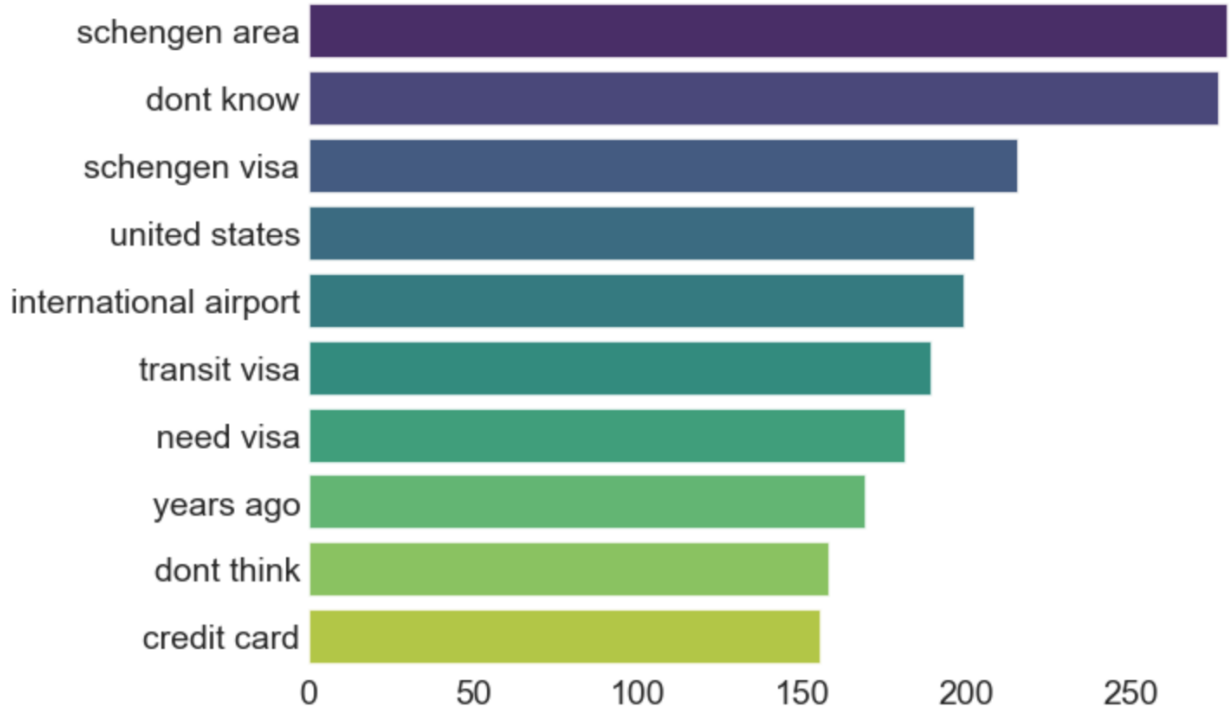
Temperatura 26

N-grams

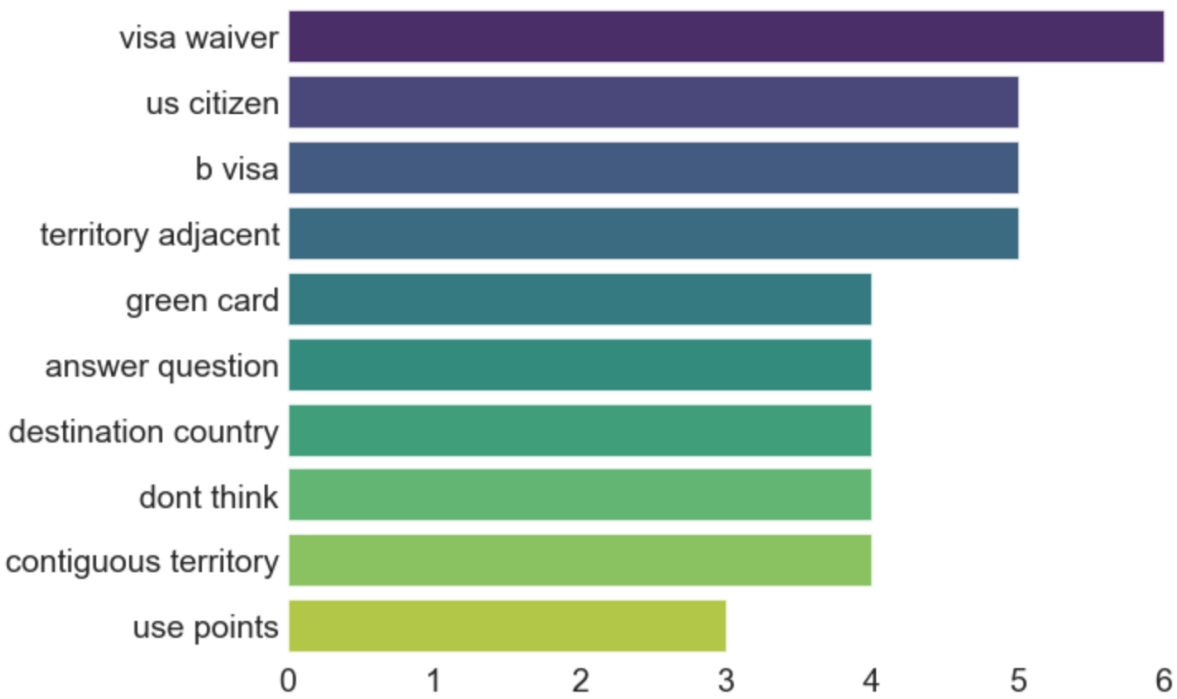

N = 1 : This is a sentence
unigrams:
this,
is,
a,
sentence
N = 2 : This is a sentence
bigrams:
this is,
is a,
a sentence
N = 3 : This is a sentence
trigrams:
this is a,
is a sentence



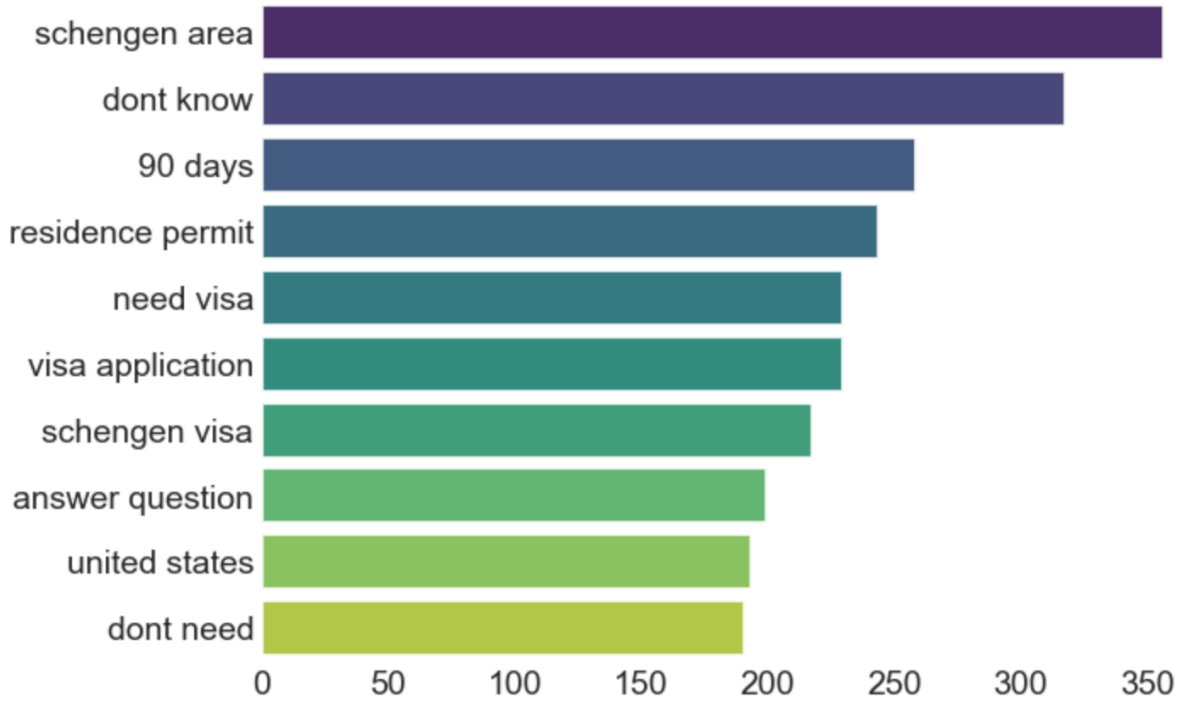
Temperatura 0



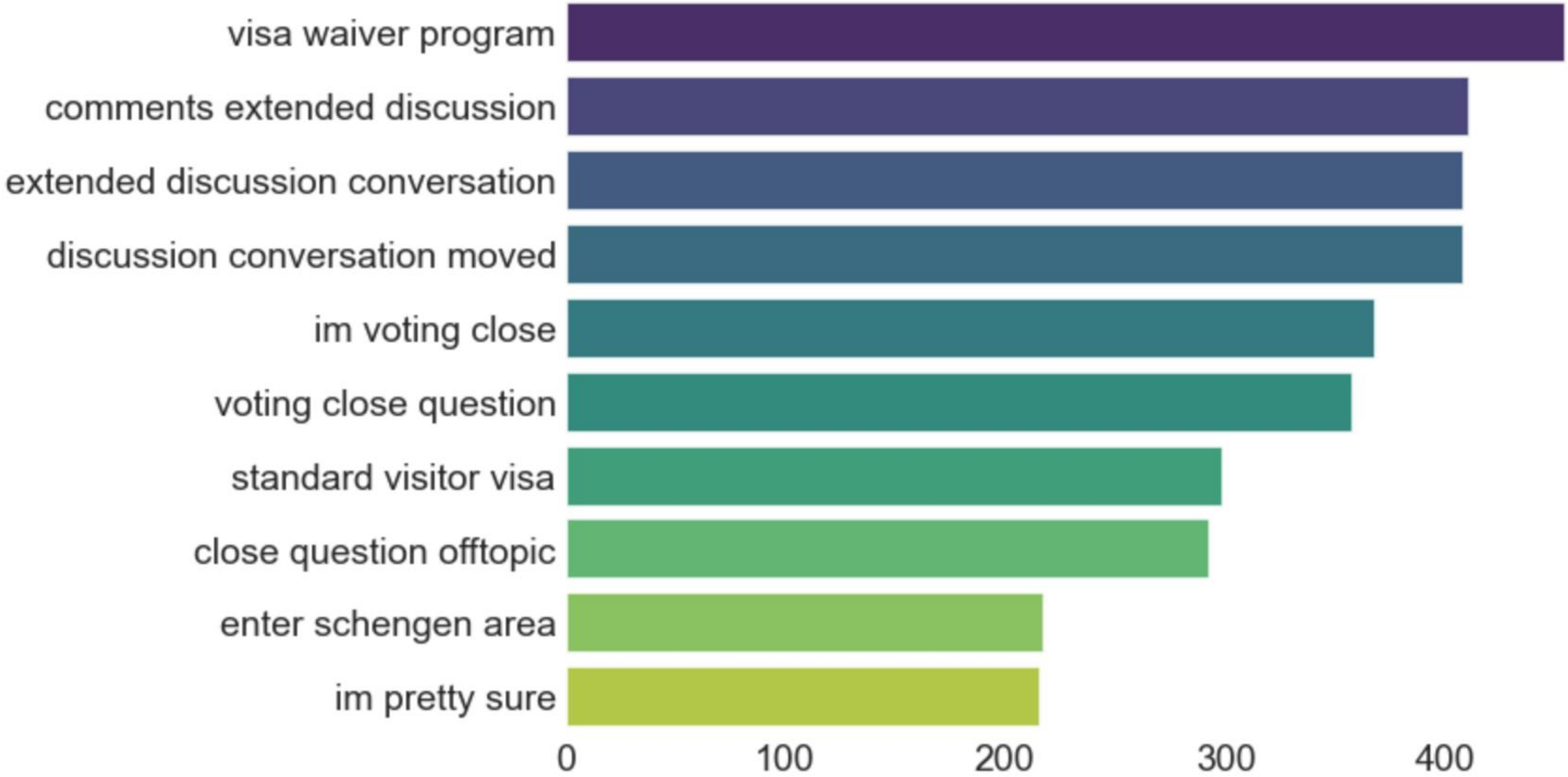
Temperatura 26



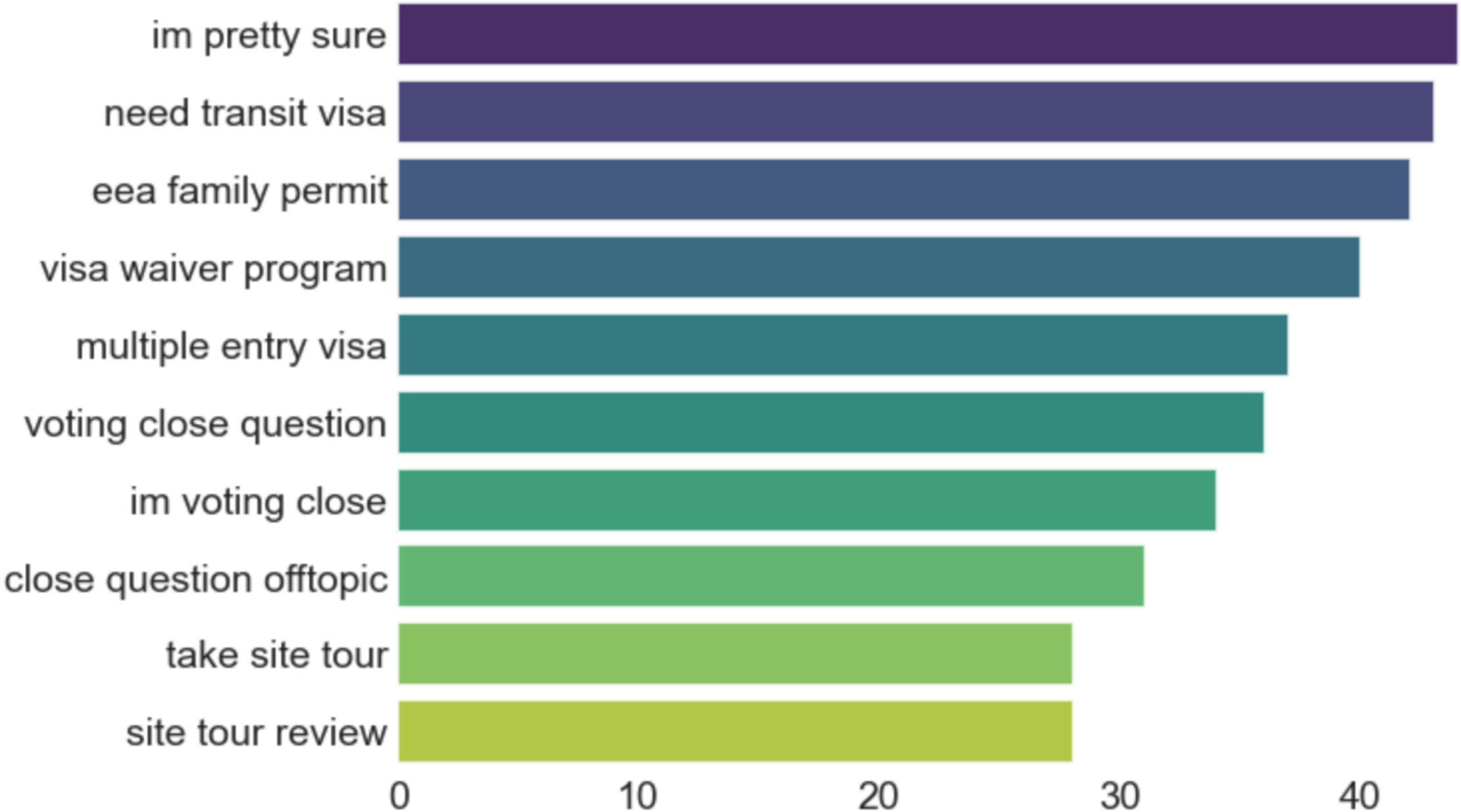
Opady 5mm



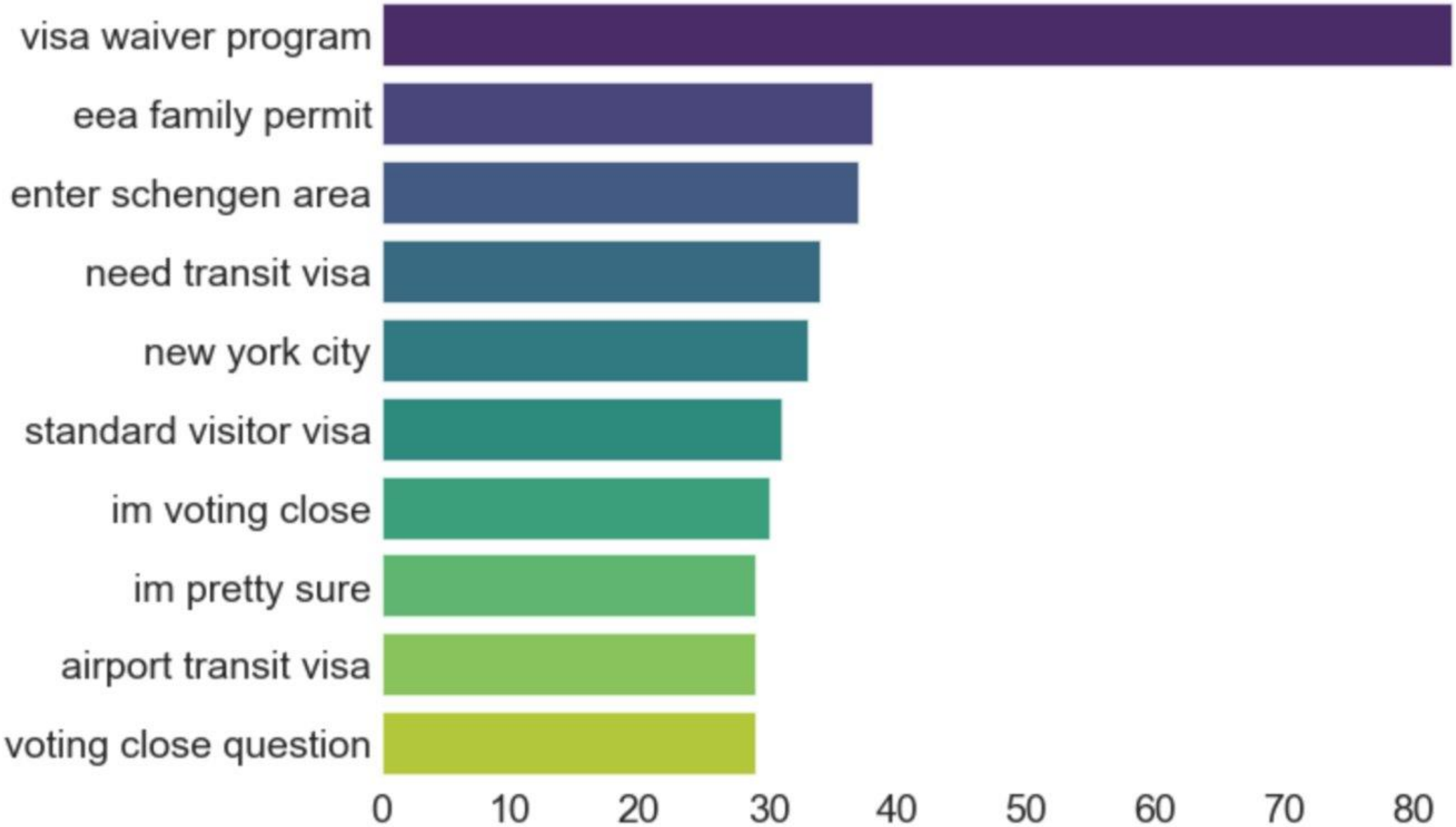
Wilgotność 90%



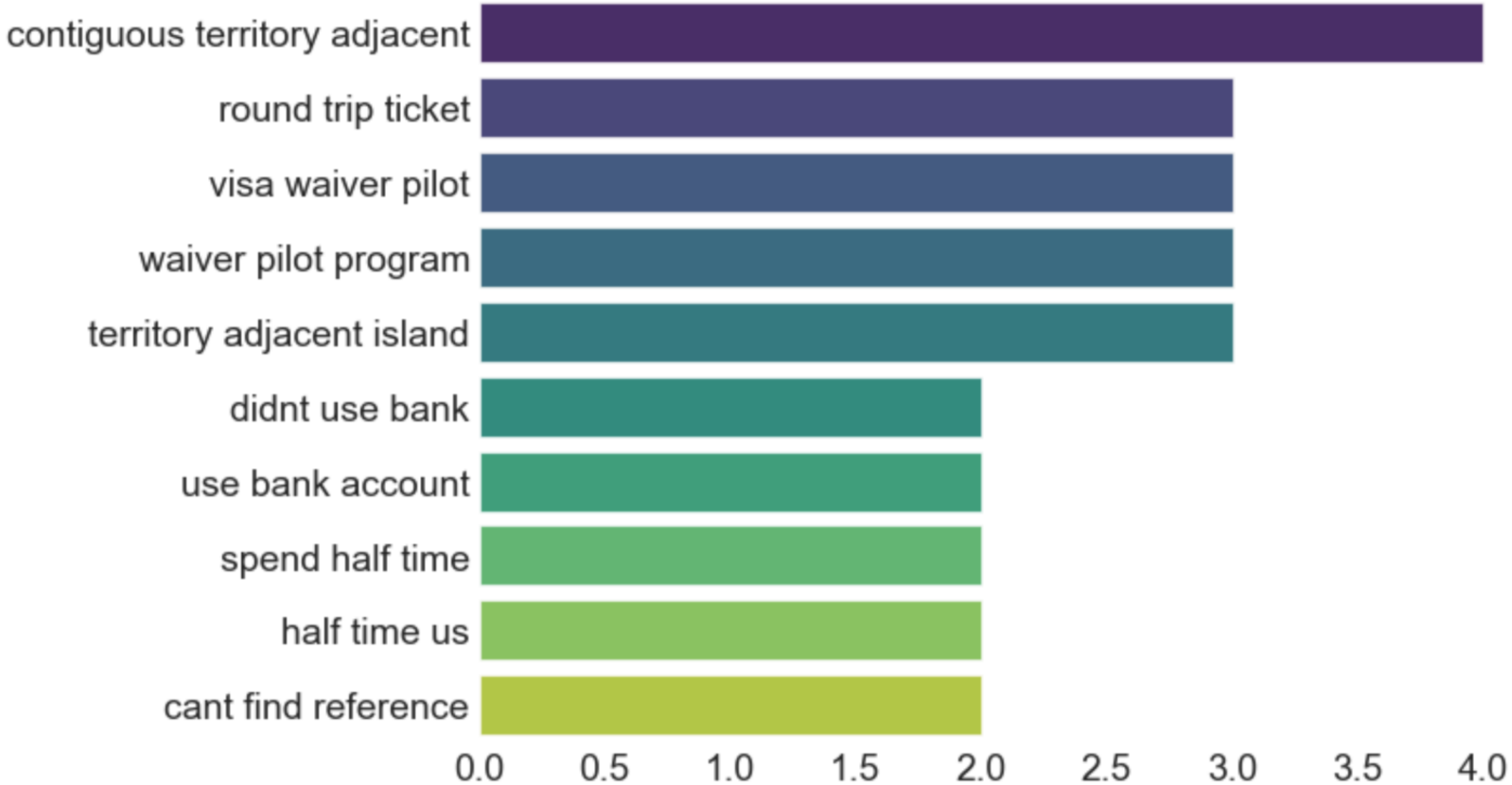
Temperatura 0-26



Temperatura 26



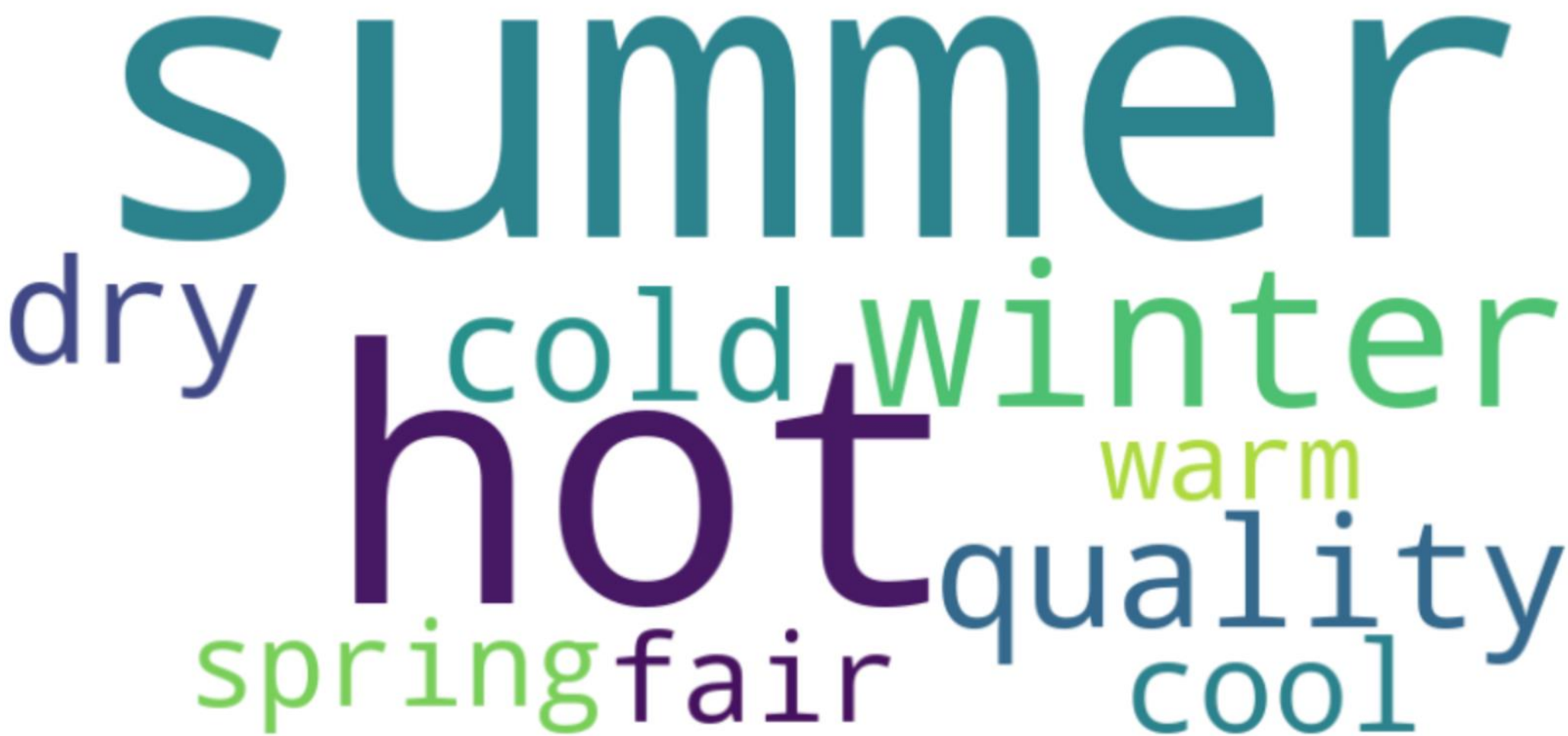
Temperatura 0


contiguous territory adjacent
round trip ticket
visa waiver pilot
waiver pilot program
territory adjacent island
didnt use bank
use bank account
spend half time
half time us
cant find reference
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0

Opady 5mm

```
# Temperature
"Warm", "Cold", "Hot", "Chilly", "Freezing", "Boiling", "Mild", "Cool",
# Precipitation
"Rainy", "Rainfall", "Showers", "Drizzle", "Downpour", "Thunderstorm", "Snowy", "Snowfall", "Blizzard", "Sleet",
# Wind
"Windy", "Wind", "speed", "Gusts", "Breezy", "Gale", "Cyclone", "Tornado", "Hurricane", "Typhoon", "Whirlwind",
# Clouds
"Cloudy", "Overcast", "Partly", "cloudy", "skies", "Cumulus", "Cirrus", "Stratus", "Nimbus", "Foggy", "Misty",
# Atmospheric Pressure
"pressure", "Barometric", "Atmospheric", "gradient",
# Humidity
"Humid", "Dry", "Moist", "Humidity", "Relative", "Dew", "Muggy",
# Seasons
"Spring", "Summer", "Autumn", "Fall", "Winter", "Monsoon", "Dry", "Wet", "Harvest",
# Conditions
"Sunny", "Fair", "Pleasant", "Stormy", "Changeable", "Variable", "Unsettled", "Extreme",
# Events
"Heatwave", "Cold", "snap", "Frontal", "Severe", "Natural", "disaster", "warning", "forecast", "Climate",
# Other
"UV", "index", "Sunrise", "Sunset", "Moon", "phase", "Visibility", "quality", "satellite", "radar"
```

Temperatura 0



Temperatura 26

Opady 5mm

Temperatura 0-26

Temperatura 26

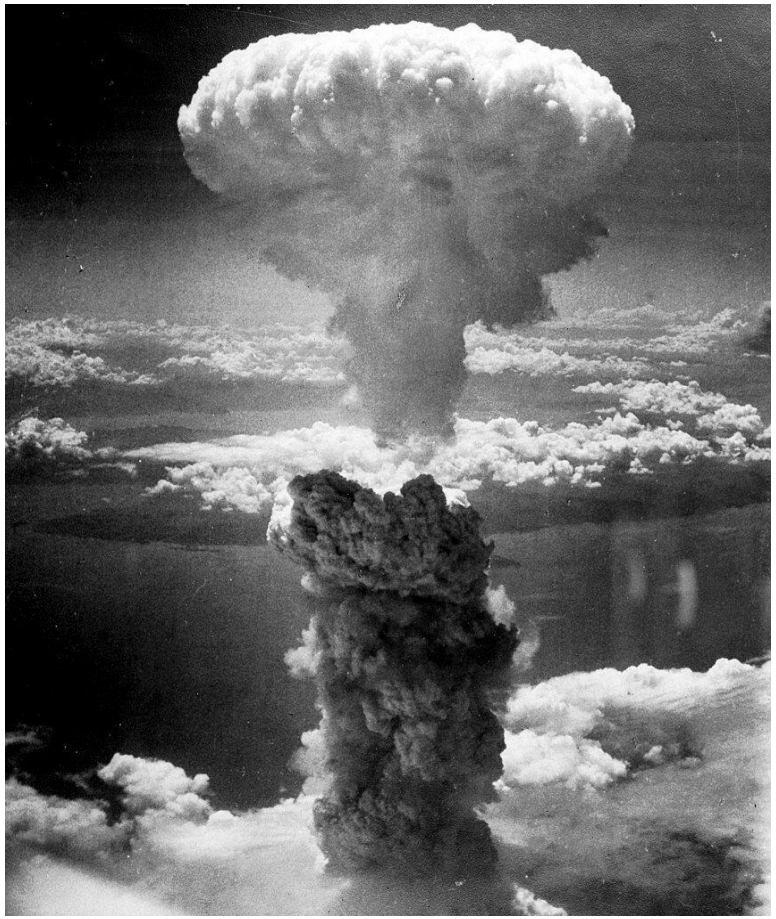
Temperatura 0

Wilgotność 30

Podsumowując

Yahor Lahunovich

Nieudane próby

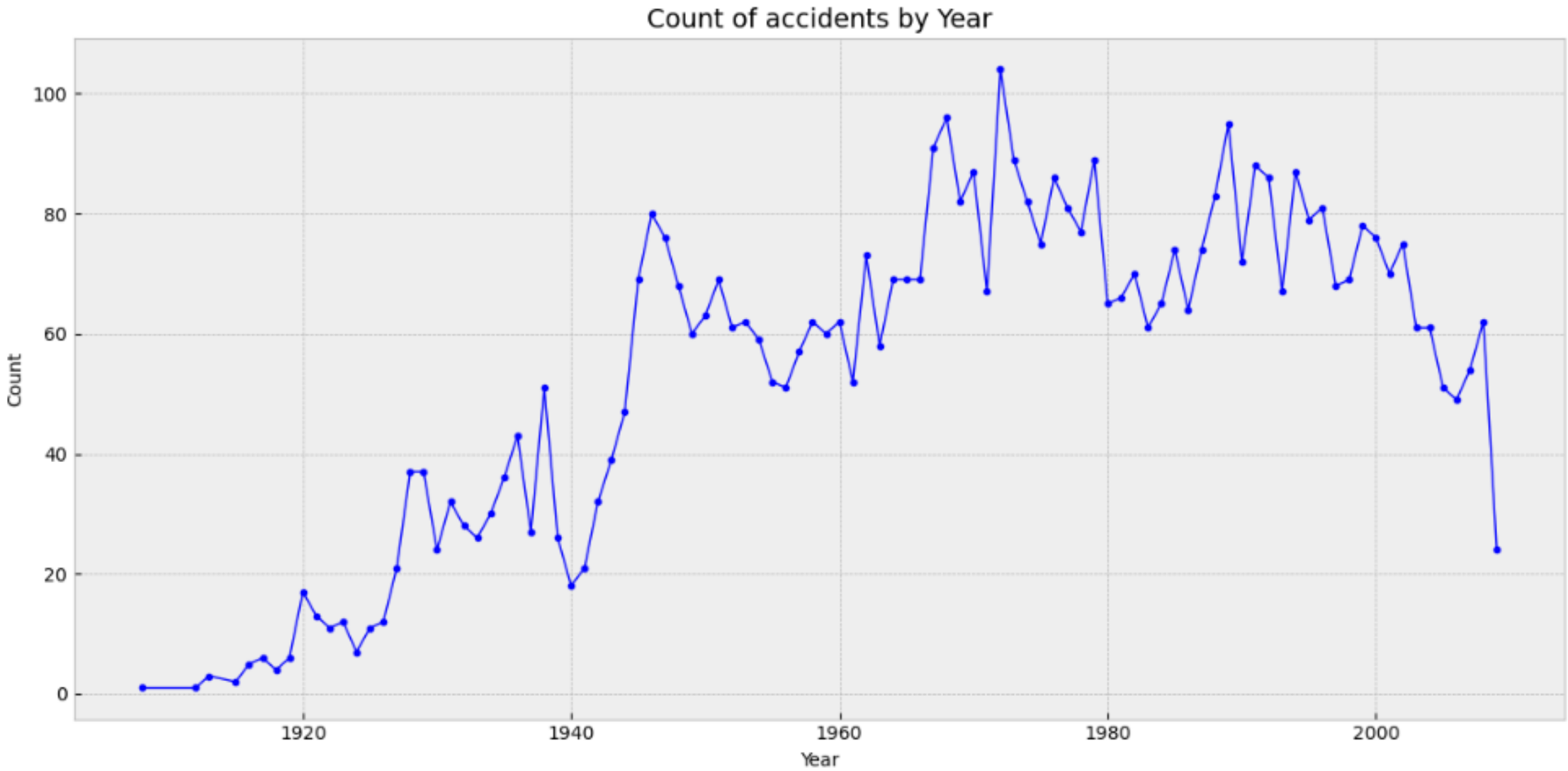


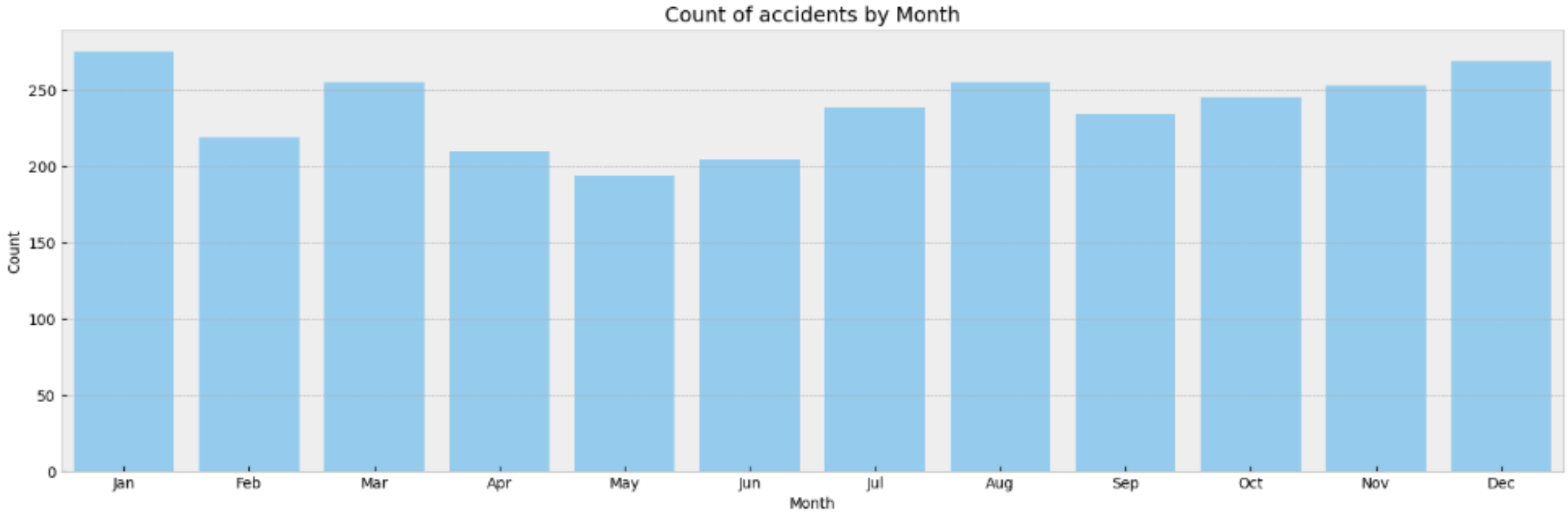
Biblioteki:

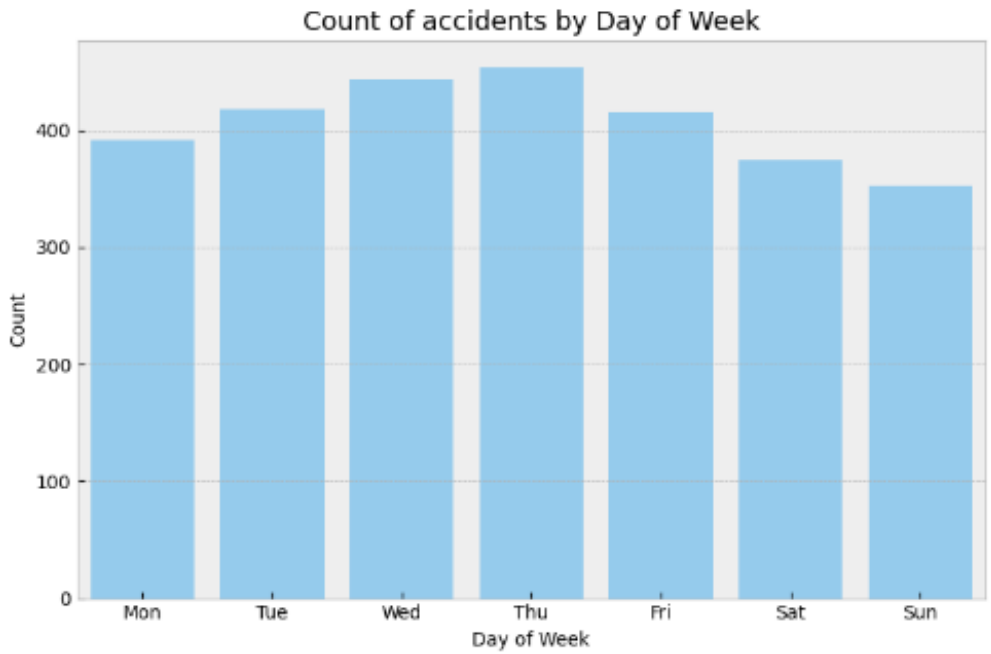
- Numpy
- Pandas
- Matplotlib
- Seaborn
- Wordcloud
- Cartopy
- Plotly

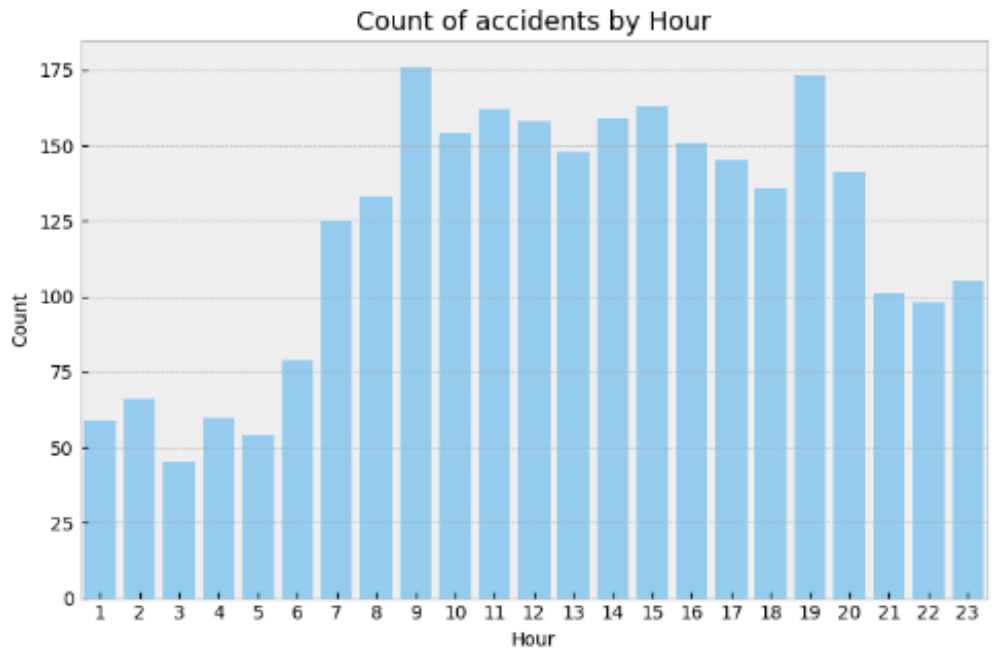
Pytania:

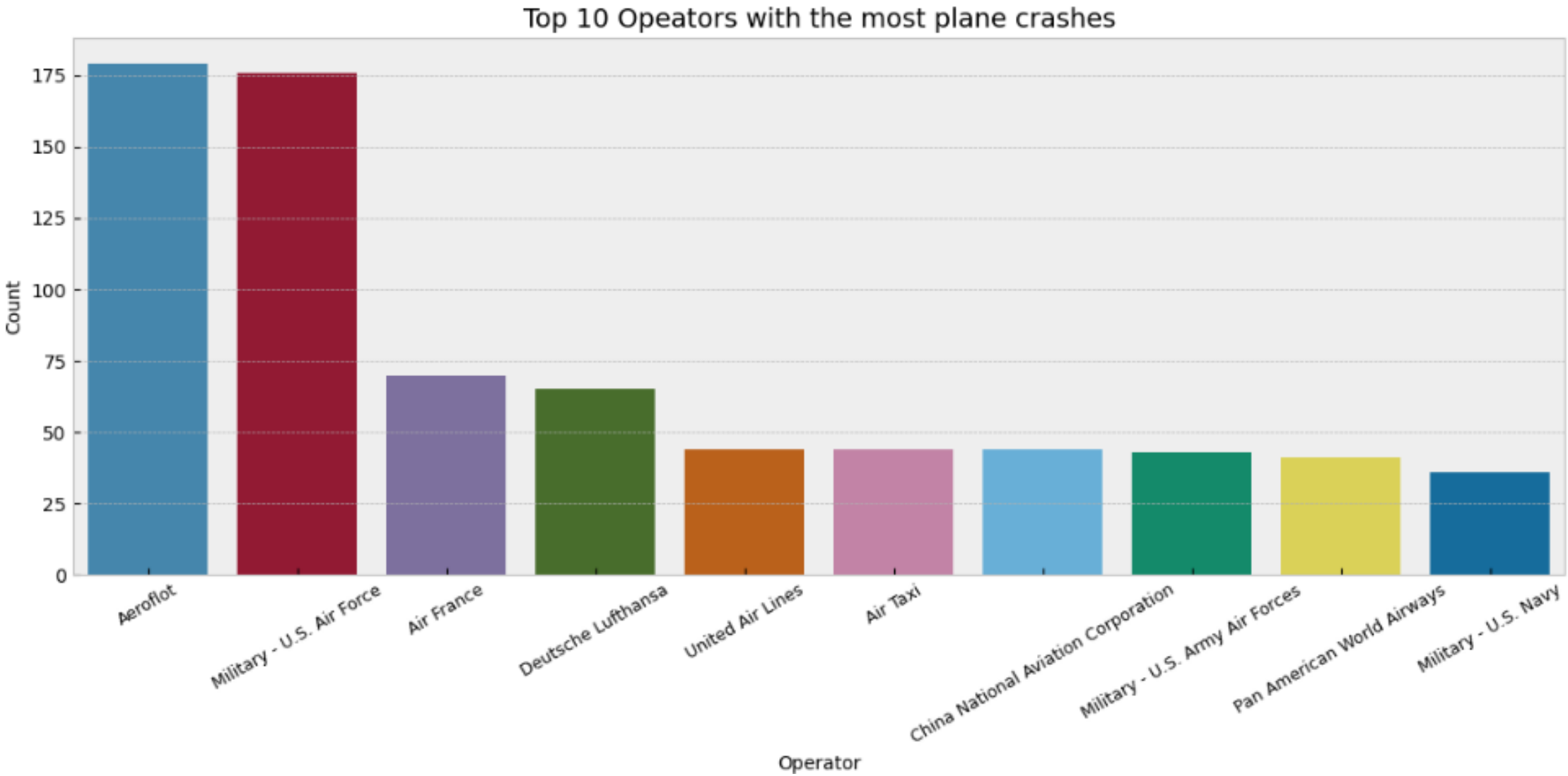
- Kiedy było najwięcej katastrof lotniczych?
- Kiedy zdarza się najwięcej wypadków lotniczych?
- Gdzie było najwięcej katastrof lotniczych?
- Jakie warunki pogodowe mogą mieć poważny wpływ na katastrofy lotnicze?


Count of accidents by Year
Count
Year
0
20
40
60
80
100
1920
1940
1960
1980
2000


Count of accidents by Month
Count
0
50
100
150
200
250
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Count of accidents by Day of Week
Count
0
100
200
300
400
Mon
Tue
Wed
Thu
Fri
Sat
Sun
Day of Week

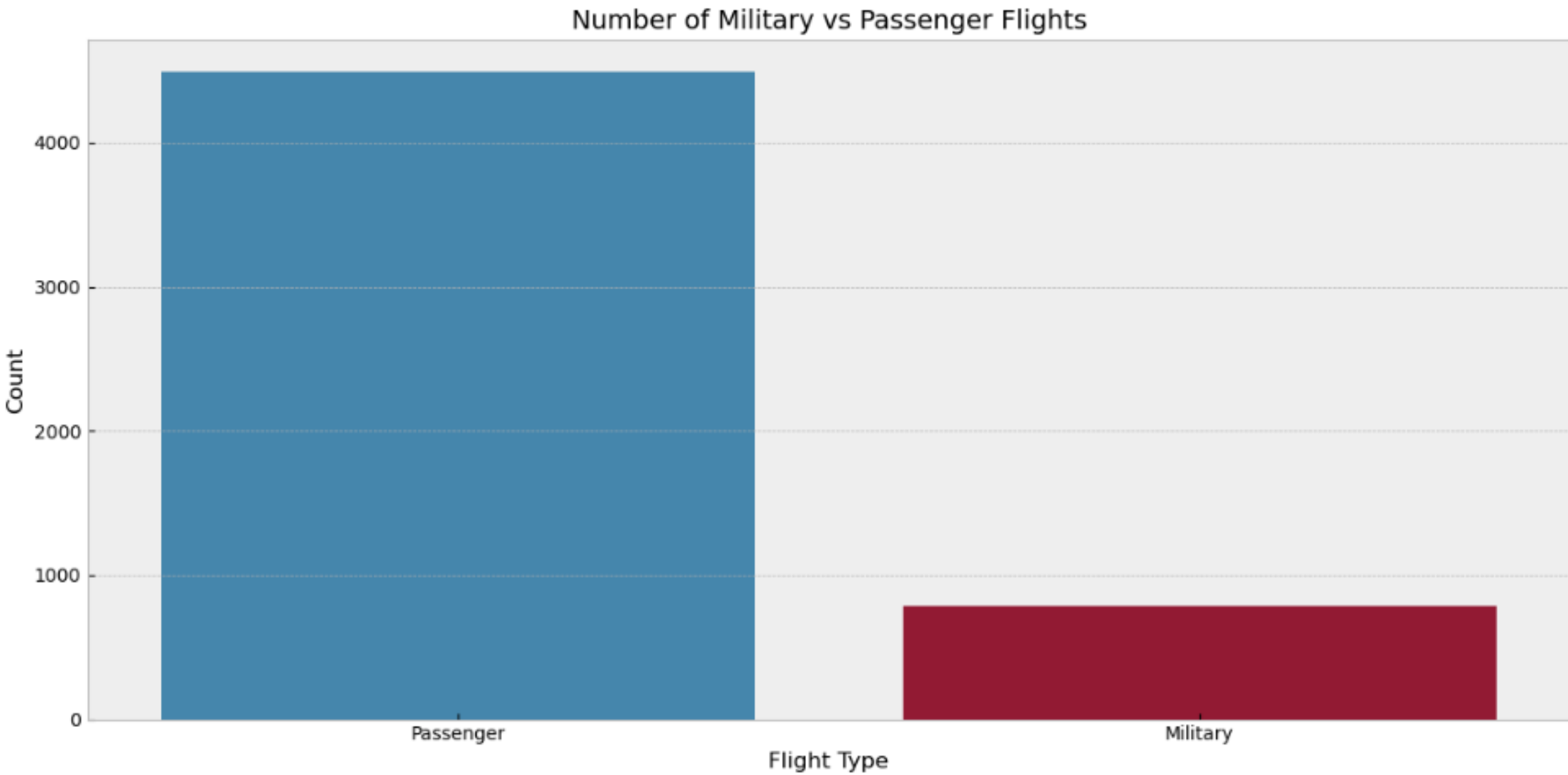

Count of accidents by Hour
Count
0
25
50
75
100
125
150
175
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
Hour


Top 10 Opeators with the most plane crashes
Count
0
25
50
75
100
125
150
175
Aeroflot
Military - U.S. Air Force
Air France
Deutsche Lufthansa
United Air Lines
Air Taxi
China National Aviation Corporation
Military - U.S. Army Air Forces
Pan American World Airways
Military - U.S. Navy
Operator

In [76]:
```
operators[operators["Operator"] == "LOT Polish Airlines"]
```

Out[76]:

	Operator	count
49	LOT Polish Airlines	12


Number of Military vs Passenger Flights
Count
4000
3000
2000
1000
0
Passenger
Military
Flight Type

Brief Summary

Czyścimy Dane

- Usuwam wszystkie dane dotyczące katastrof lotniczych w których nie było podanej dokładnej godziny i miejsca
- Biorę dane dopiero od 1940 roku
- Nie chcę zestrzelonych samolotów

Uzyskanie współrzędnych dla każdej lokalizacji

Online geocoding tool

Lookup addresses Online and for FREE

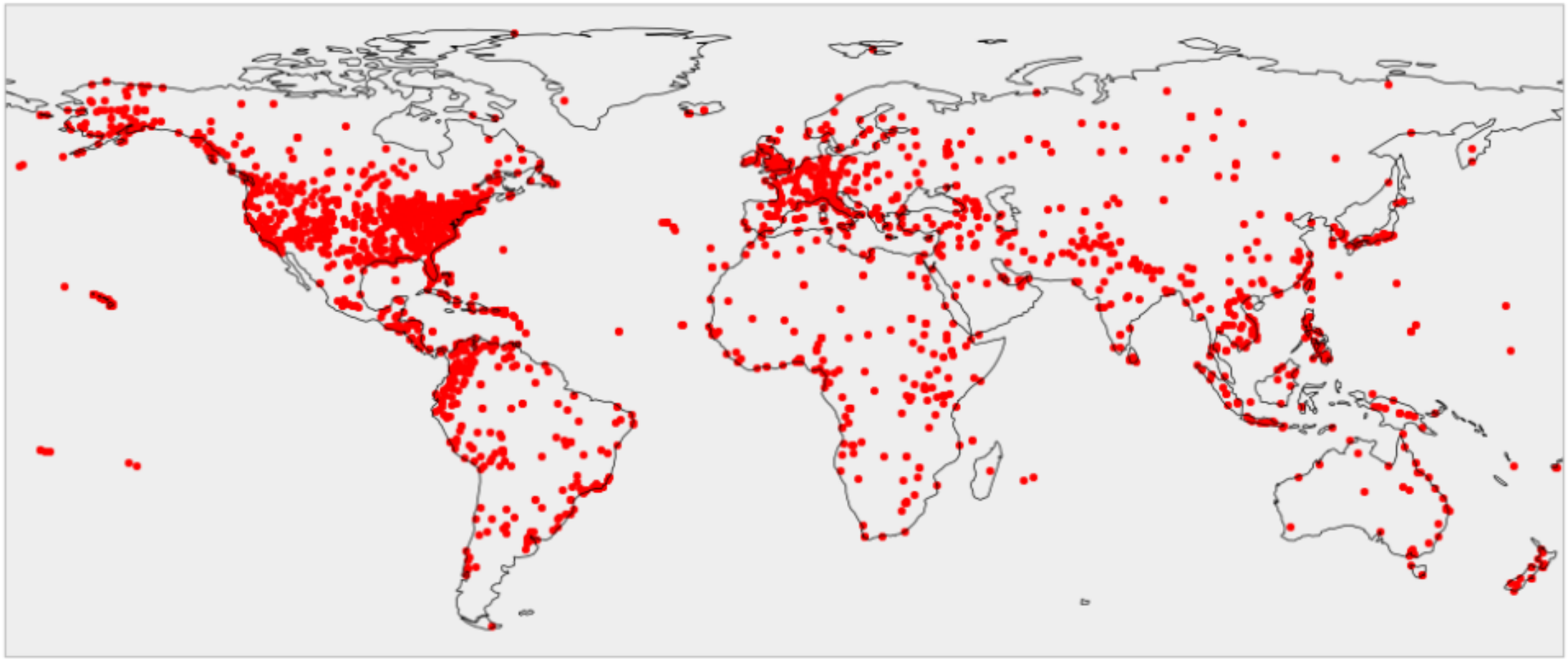
1. Upload an Excel, CSV, or text file that contains addresses to be geocoded or copy&paste addresses to a text area
2. Map columns to the address components (house number, street, city, and etc.)
3. Geocode addresses with Geoapify Geocoder
4. Download CSV file with results

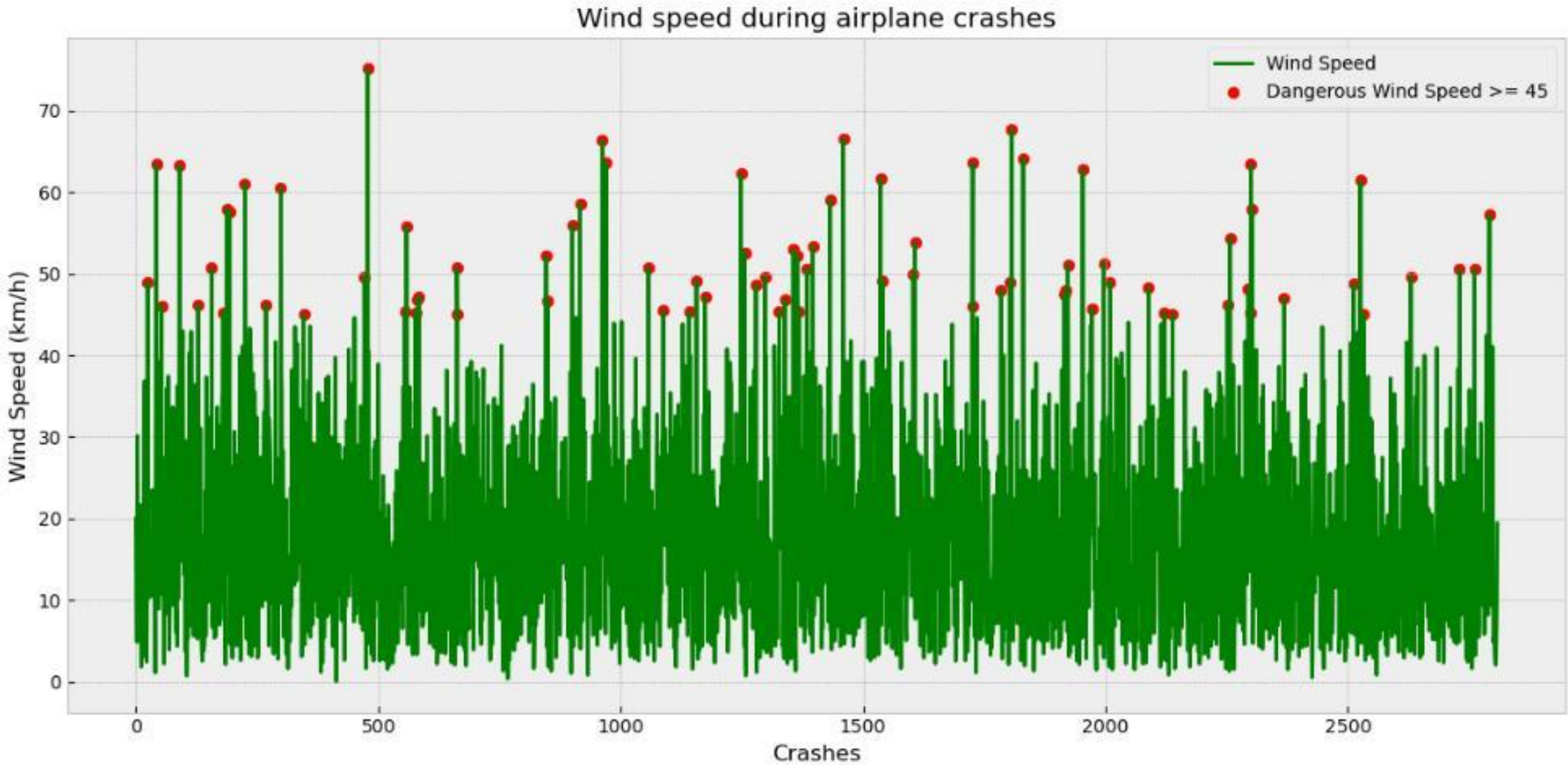
Only the first 500 rows will be processed. Please split larger datasets if necessary.

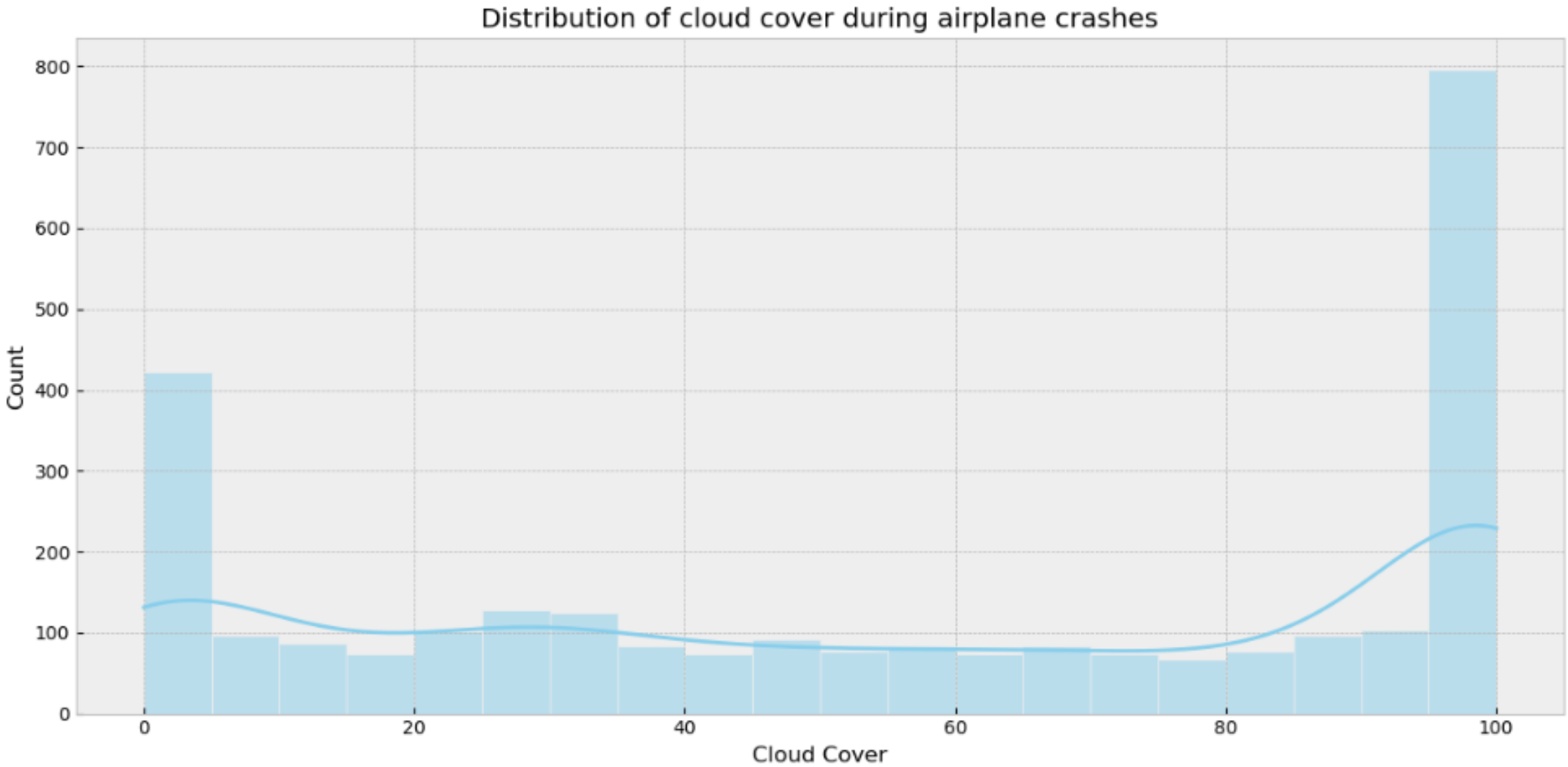
Upload a file
Select an Excel, CSV file, or text from your computer

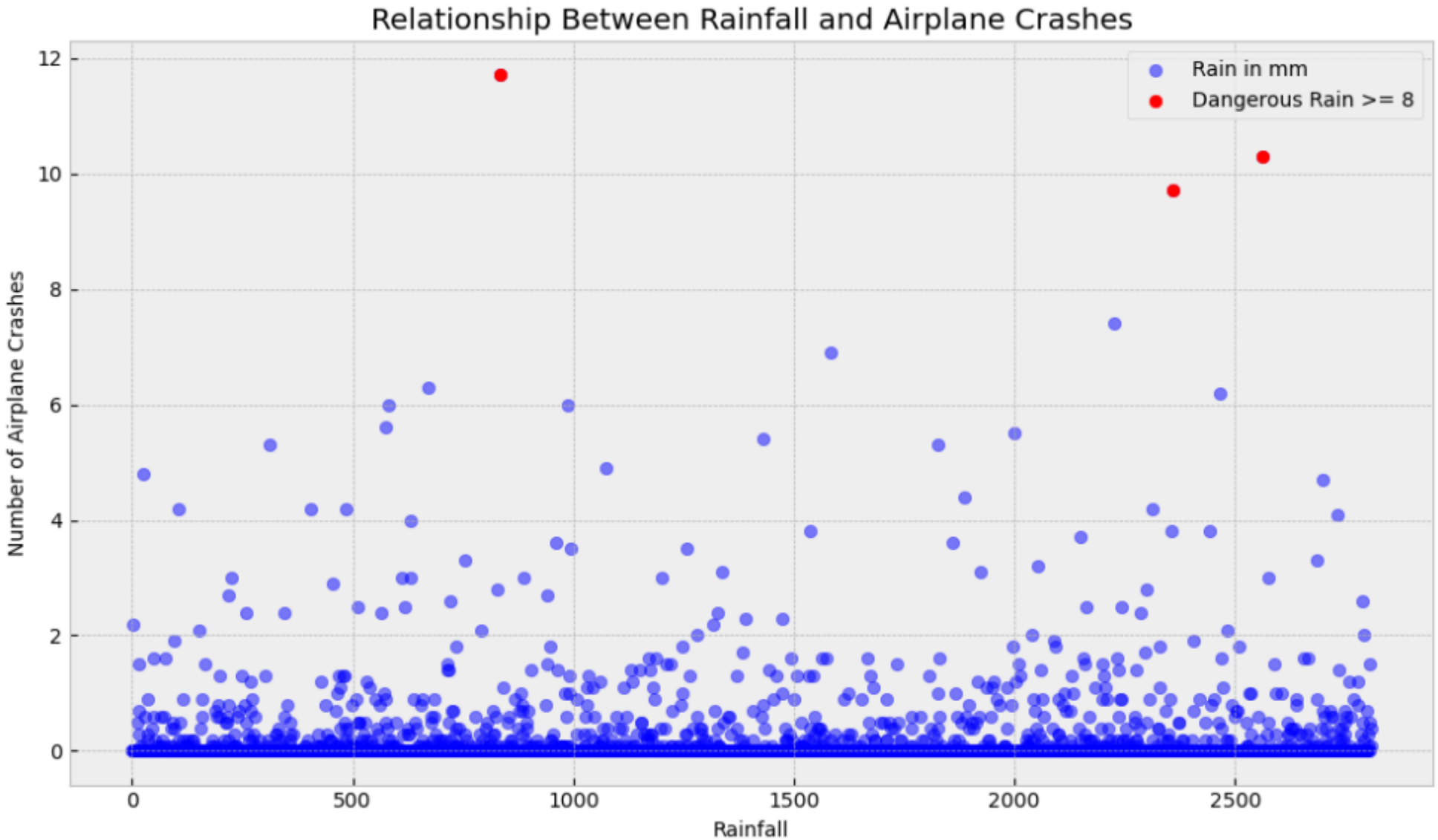
Copy & Paste
Copy and paste addresses from a list or table

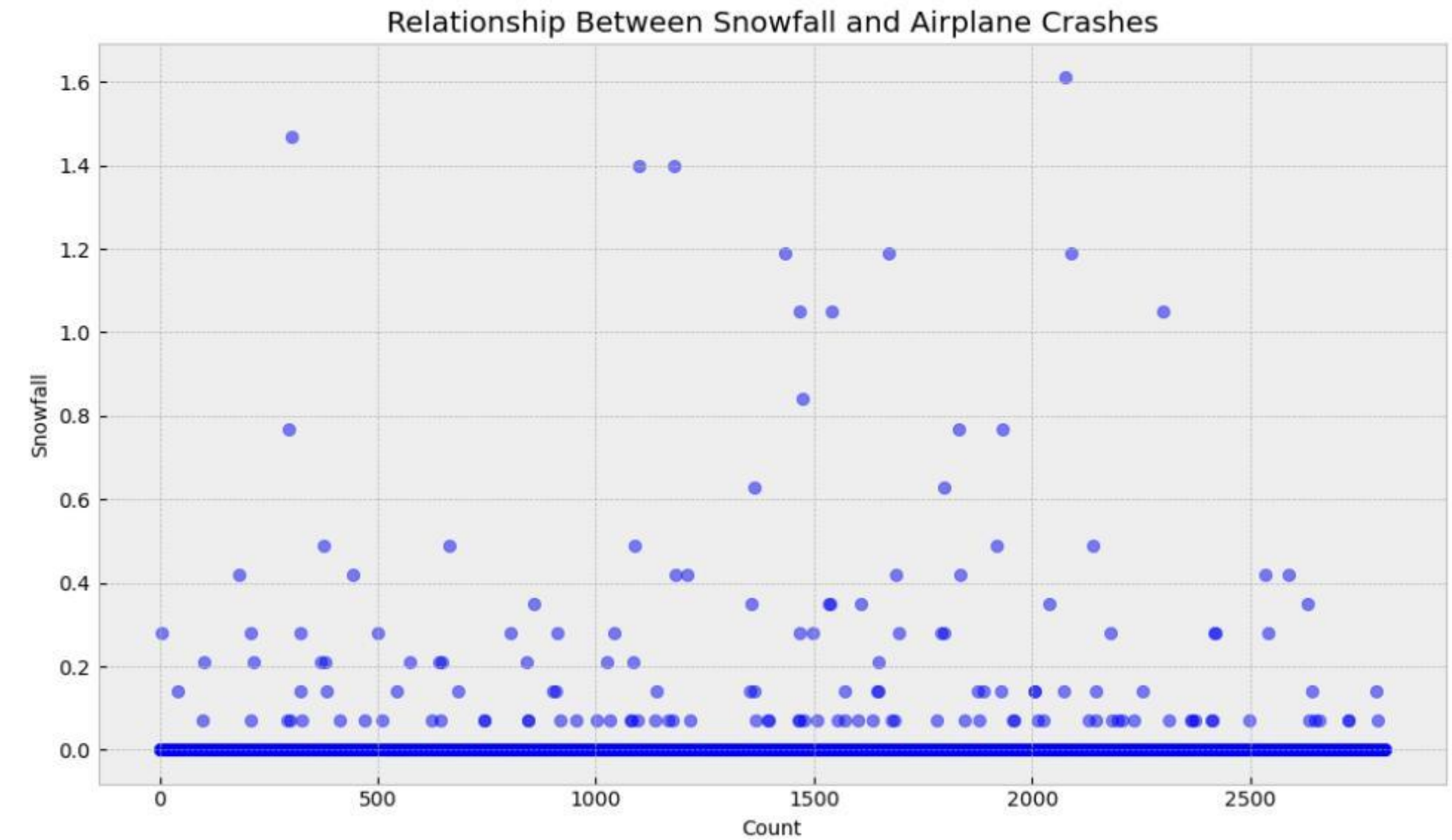
Map of plane crashes




Wind speed during airplane crashes
Wind Speed
Dangerous Wind Speed >= 45
Wind Speed (km/h)
0
10
20
30
40
50
60
70
0
500
1000
1500
2000
2500
Crashes


Distribution of cloud cover during airplane crashes
Count
Cloud Cover
0
100
200
300
400
500
600
700
800
0
20
40
60
80
100


Relationship Between Rainfall and Airplane Crashes
Rain in mm
Dangerous Rain >= 8
Number of Airplane Crashes
Rainfall
0
2
4
6
8
10
12
0
500
1000
1500
2000
2500


Relationship Between Snowfall and Airplane Crashes
Snowfall
Count
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
500
1000
1500
2000
2500

Podsumowując

Wypadki samochodowe Londyn 2023

Oleksii Vinichenko

Wykorzystane biblioteki:

- Pandas
- Numpy
- Matplotlib
- Shapely.geometry
- Pyproj
- Geopandas
- Contextily

Dane wypadów wzięte z https://tfl.gov.uk/

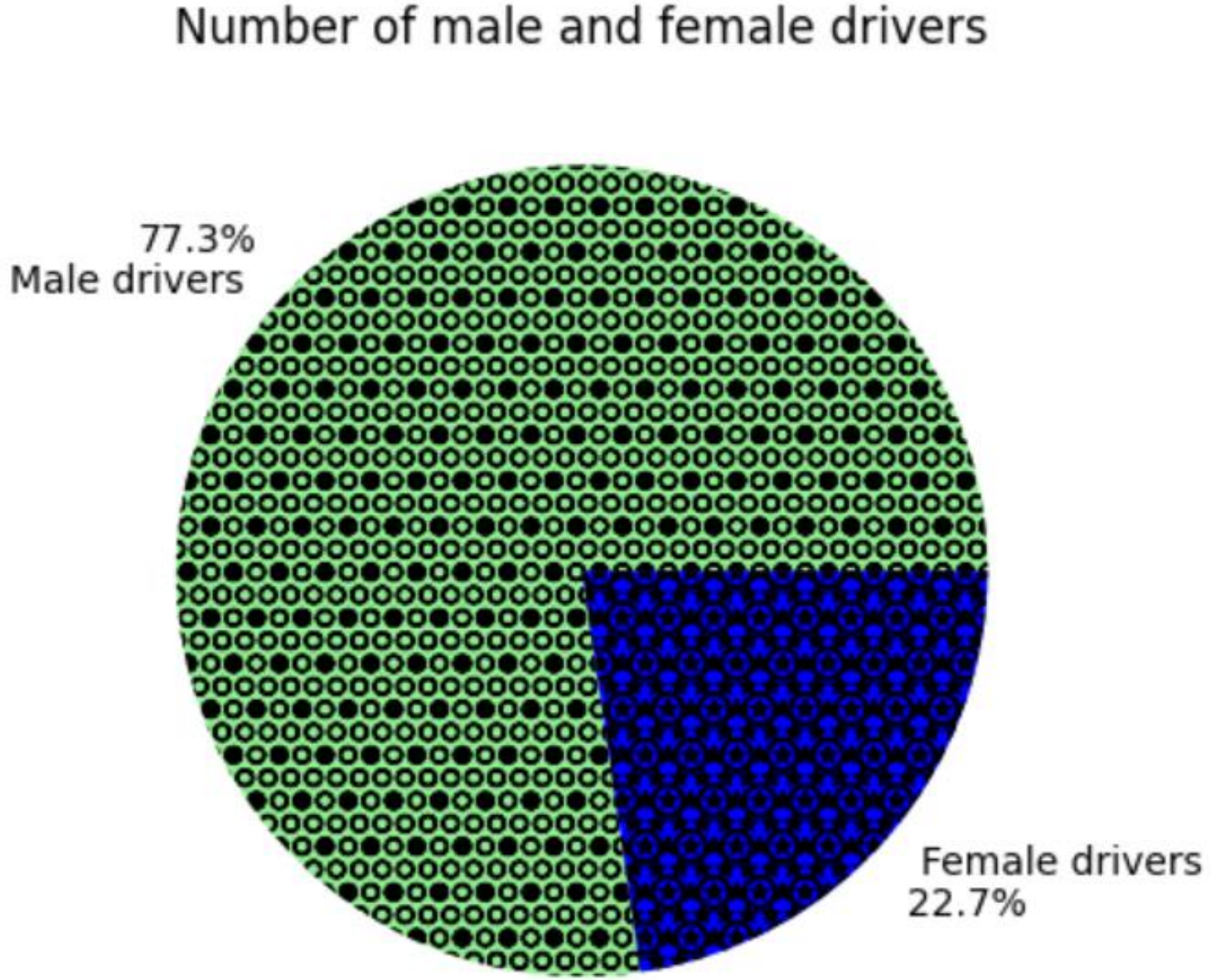
Zapoznamy się najpierw z danymi!

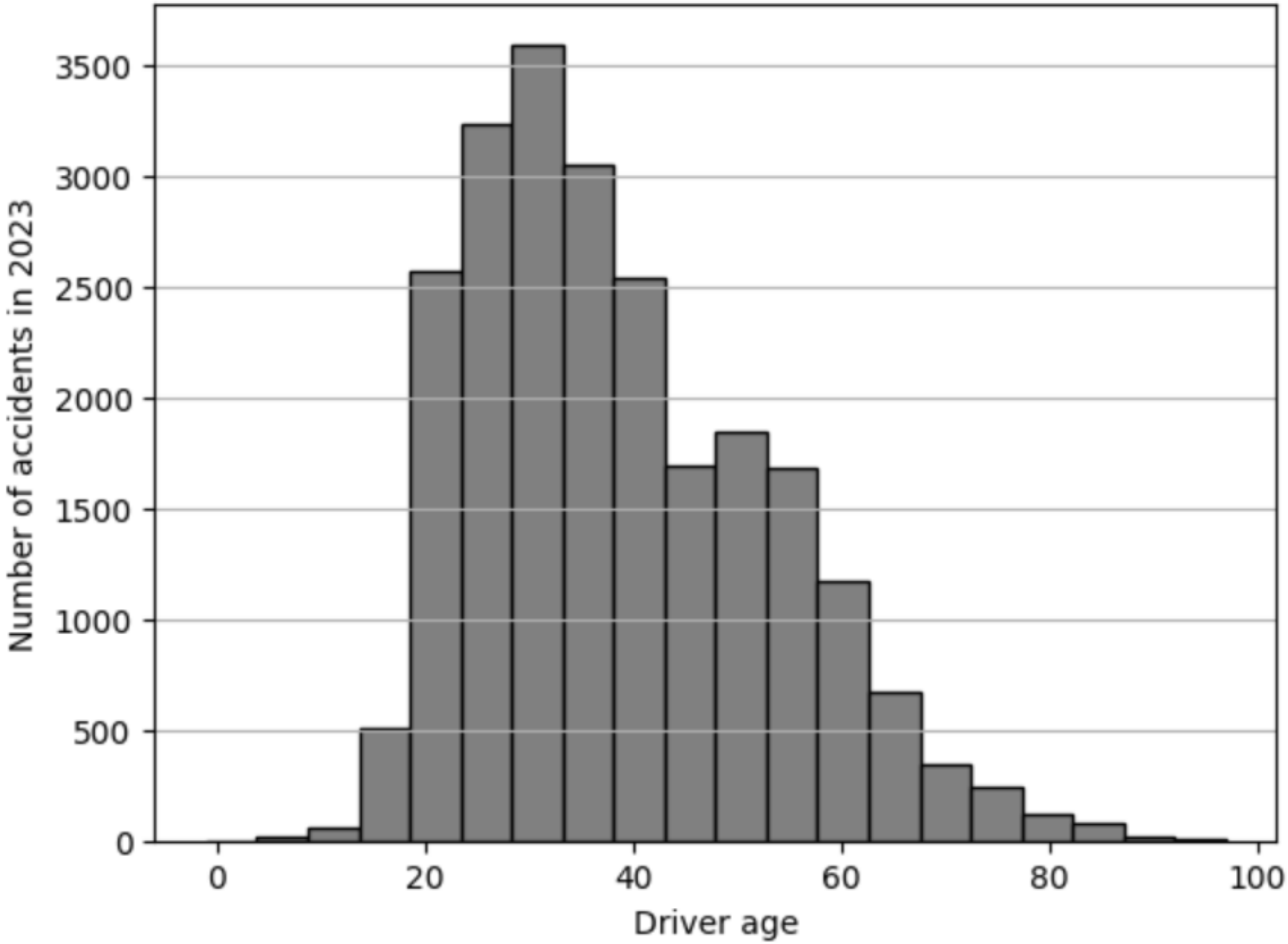
[3]:
```
accidents.columns
```

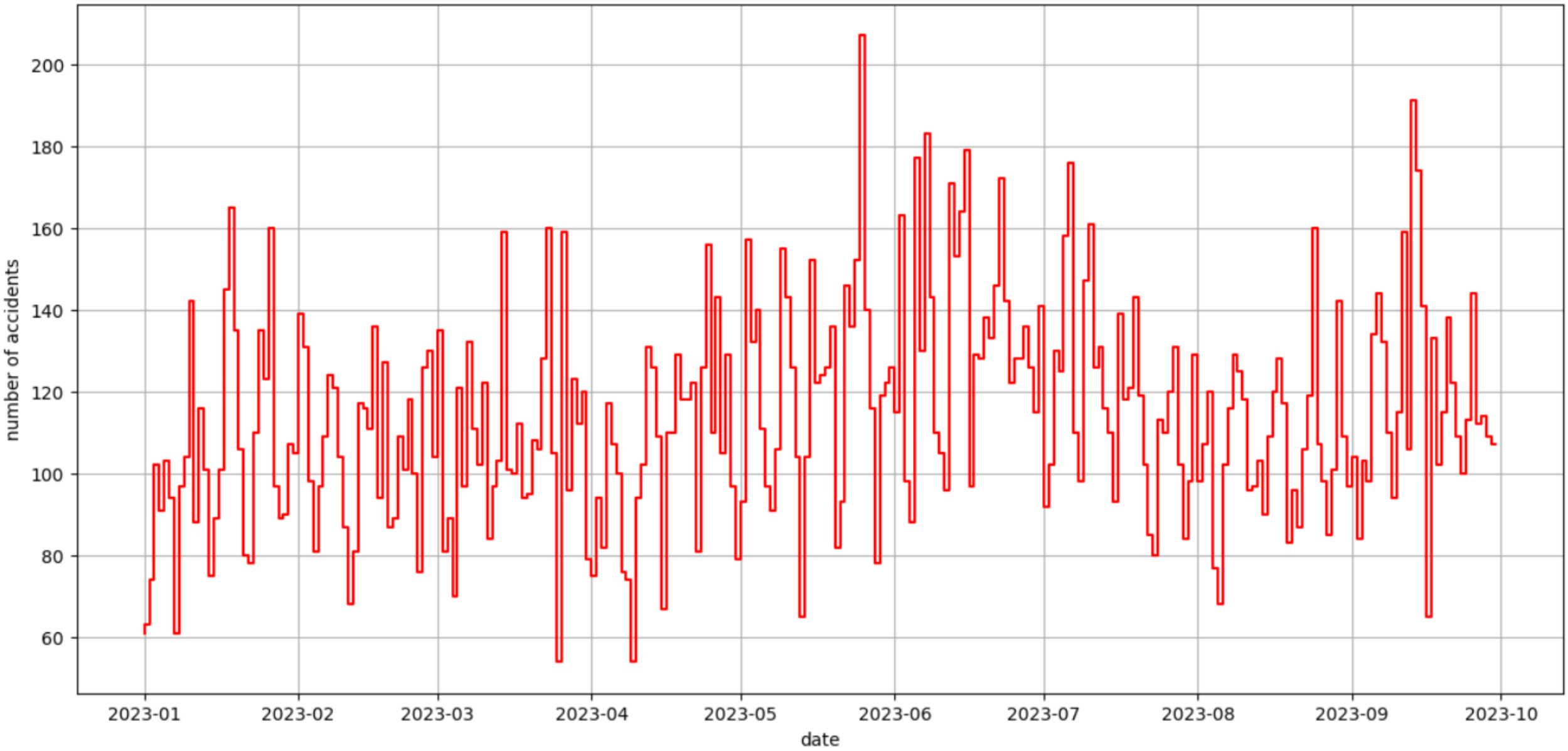
[3]:
```
Index(['_Collision Id', '_Collision Date', 'Borough Name', 'Borough Number',
       'Easting', 'Northing', '_Vehicle Id', 'Vehicle Type Banded',
       'Vehicle Type', 'Vehicle Manoeuvres',
       'Vehicle Skidding and Overturning', 'Vehicle Restricted Lane',
       'Location of Vehicle at First Impact',
       'Vehicle Hit Object in Carriageway', 'Vehicle Leaving Carriageway',
       'Vehicle Hit Object Off Carriageway', 'First Point of Impact',
       'Journey Purpose', 'Driver Gender', 'Driver Age',
       'Driver age (Banded)'],
      dtype='object')
```

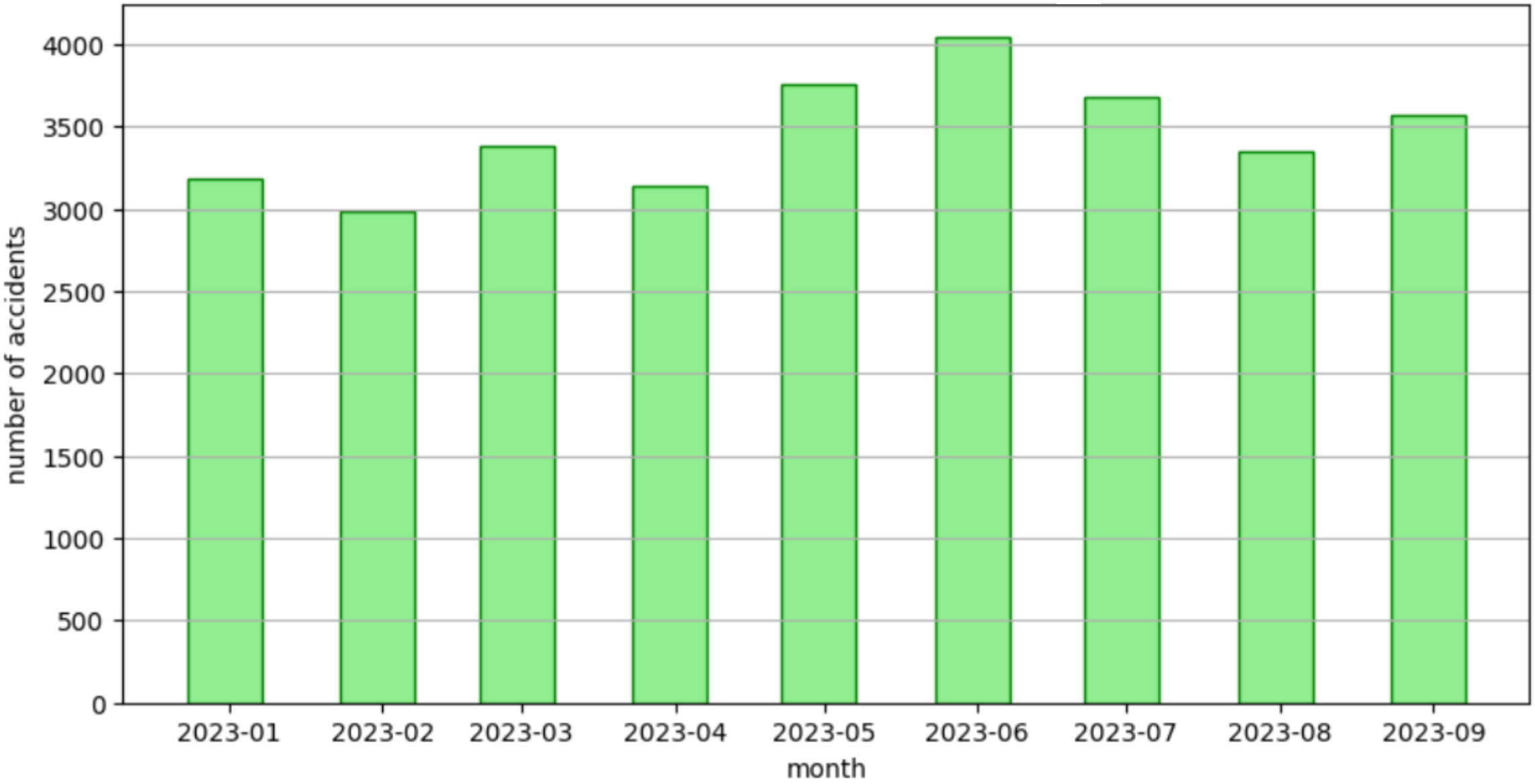
[9]:
```
accidents.loc[:, "_Collision Id"].size
```

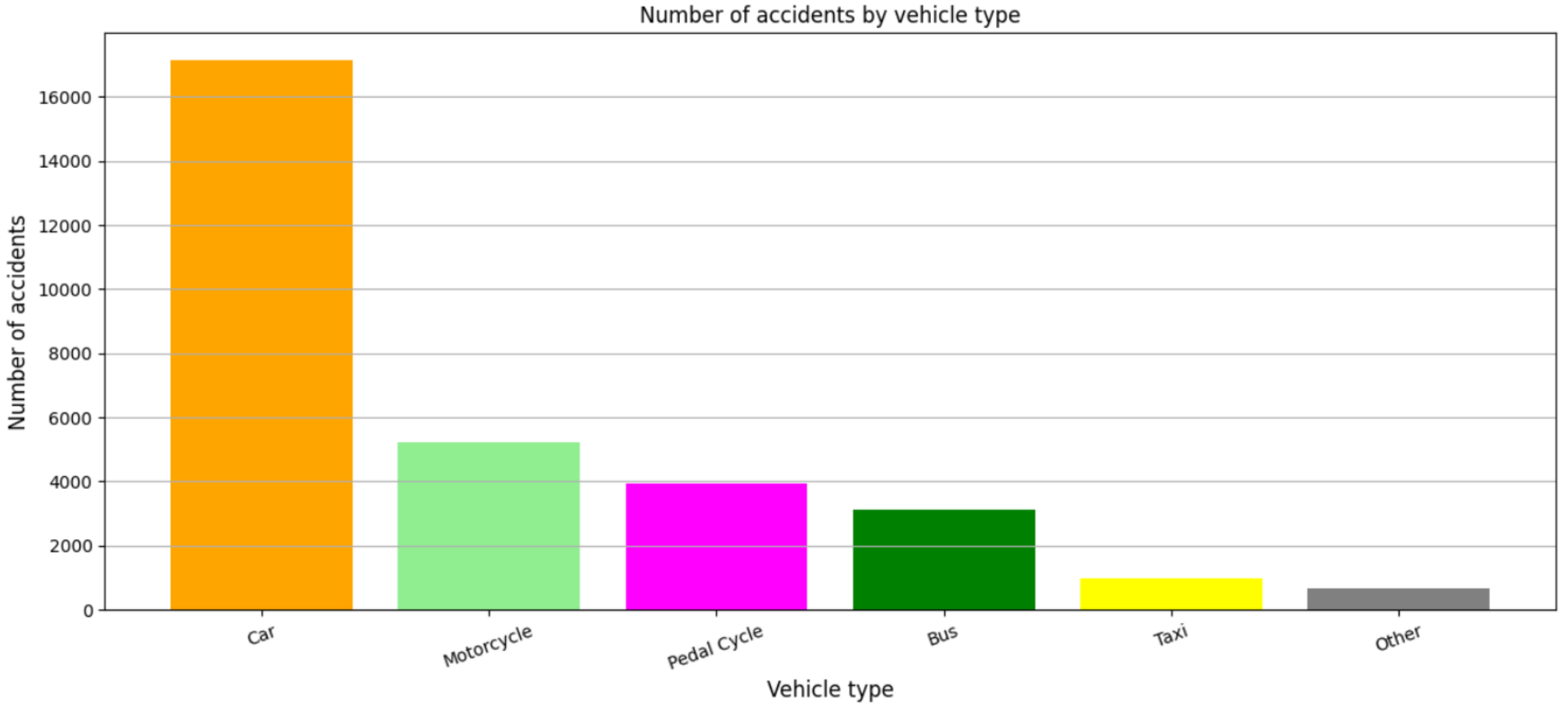
[9]:
```
31072
```


Number of male and female drivers
77.3%
Male drivers
Female drivers
22.7%

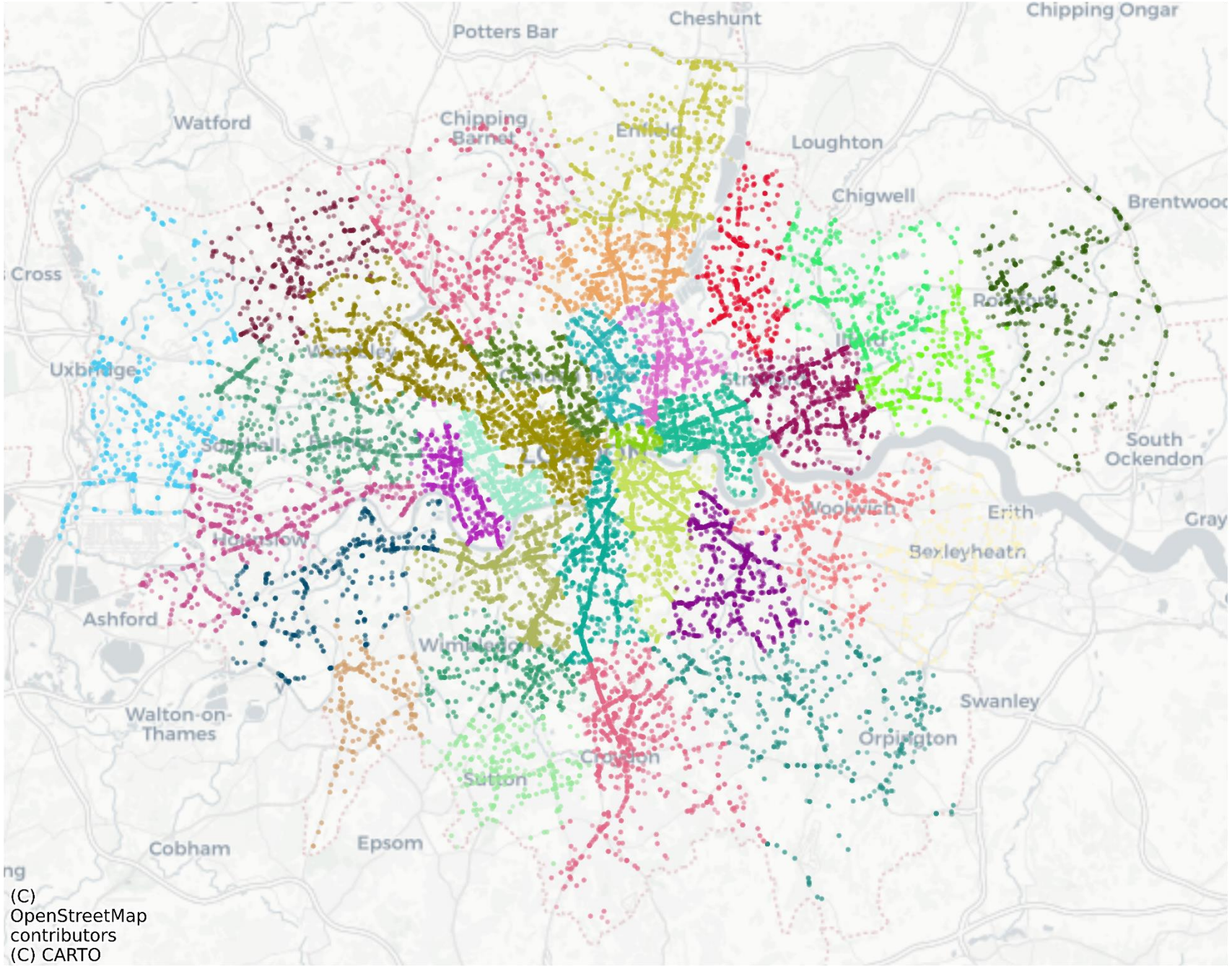

Number of accidents in 2023
3500
3000
2500
2000
1500
1000
500
0
0
20
40
60
80
100
Driver age


number of accidents
200
180
160
140
120
100
80
60
2023-01
2023-02
2023-03
2023-04
2023-05
2023-06
2023-07
2023-08
2023-09
2023-10
date

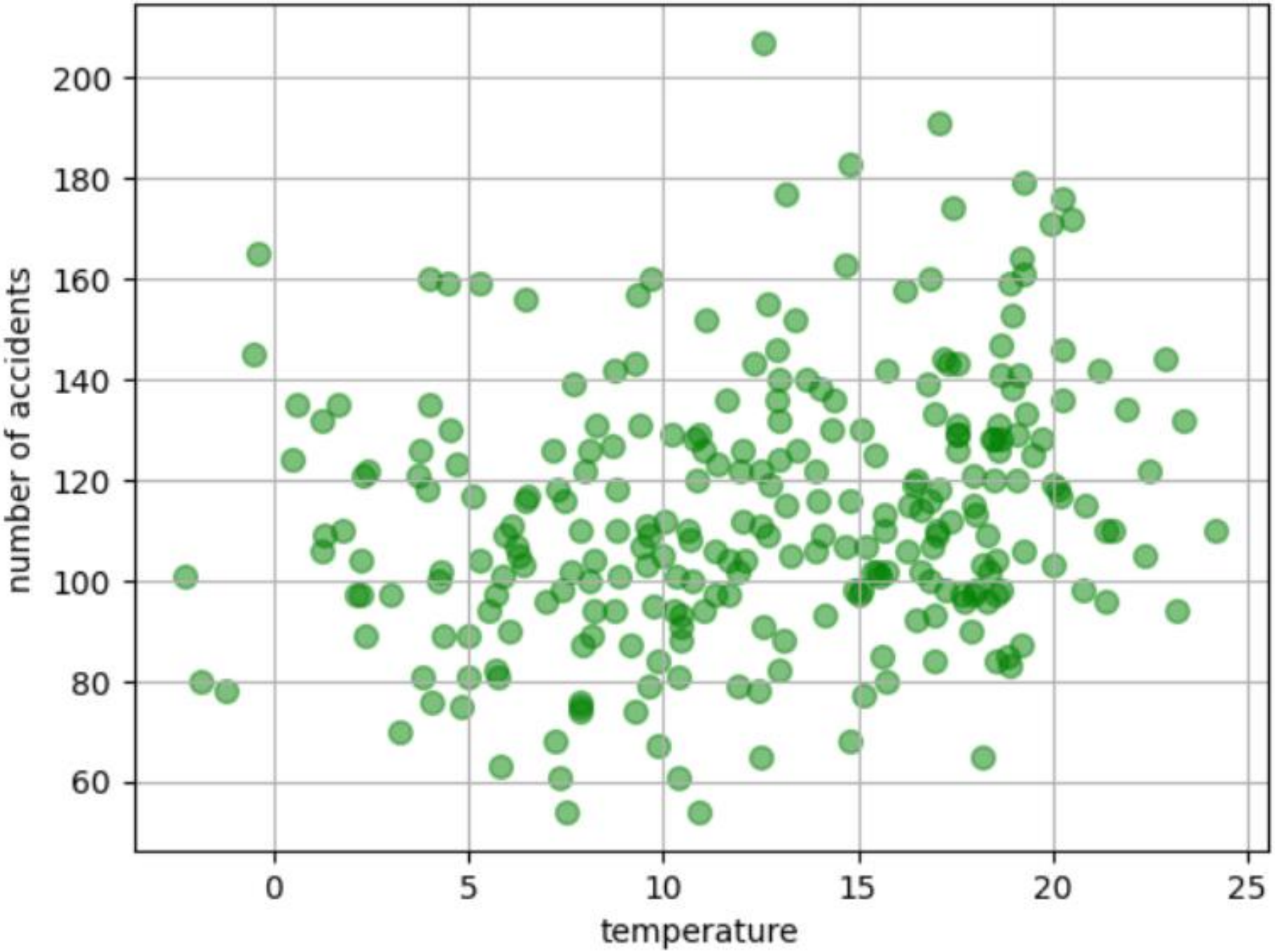

number of accidents
0
500
1000
1500
2000
2500
3000
3500
4000
2023-01
2023-02
2023-03
2023-04
2023-05
2023-06
2023-07
2023-08
2023-09
month

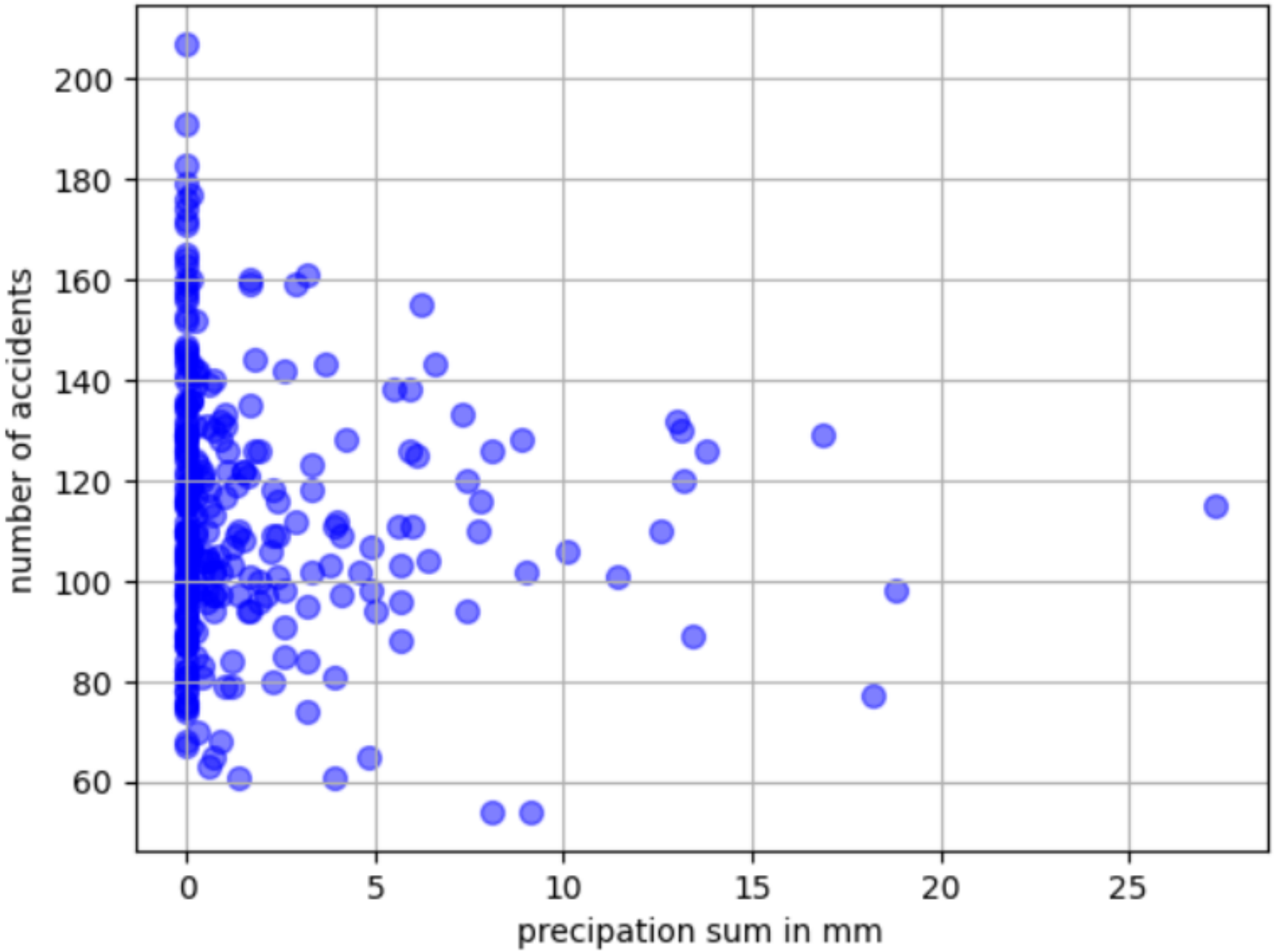

Number of accidents by vehicle type
Number of accidents
16000
14000
12000
10000
8000
6000
4000
2000
0
Car
Motorcycle
Pedal Cycle
Bus
Taxi
Other
Vehicle type

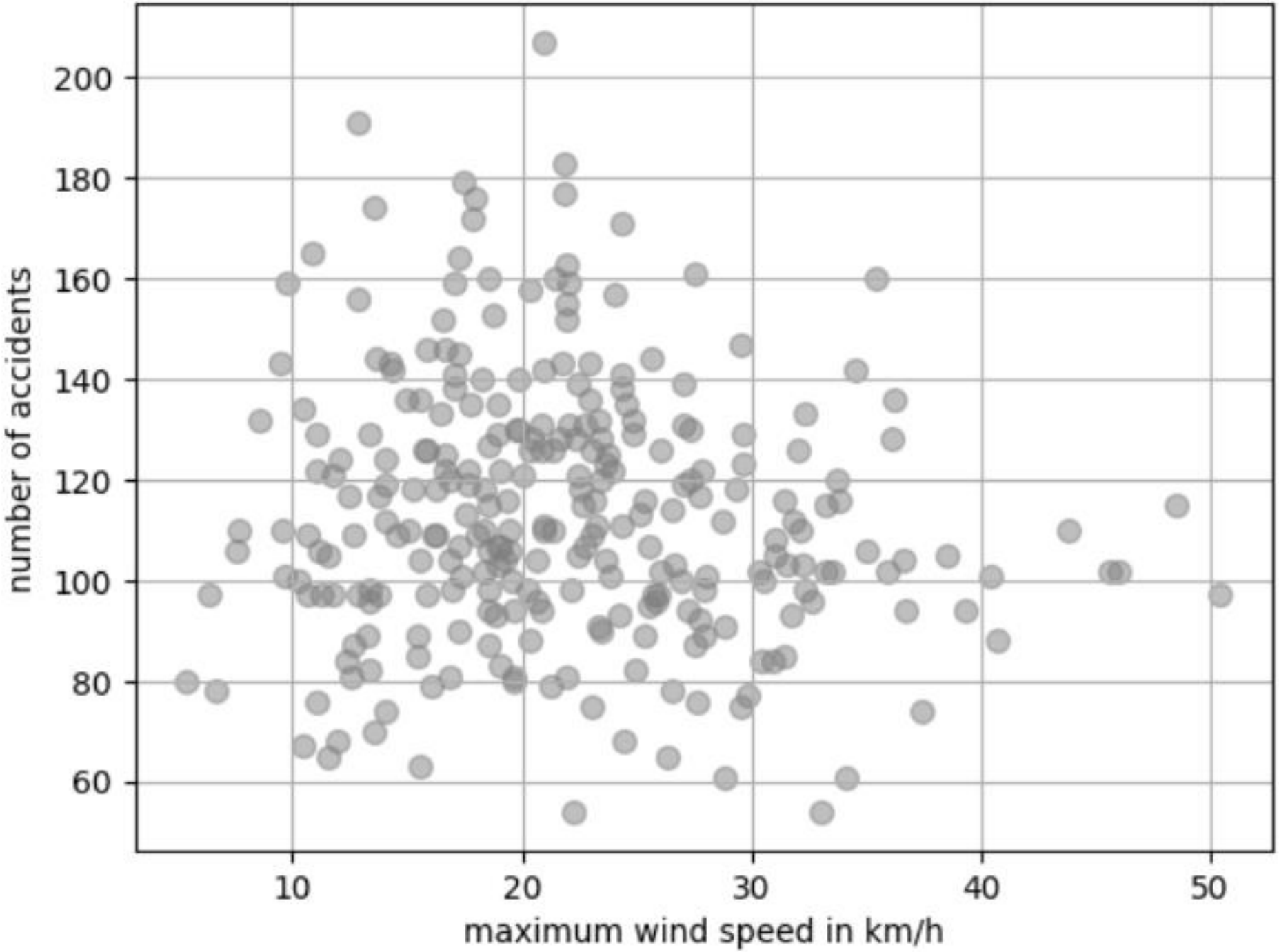
Map of road accidents in London 2023

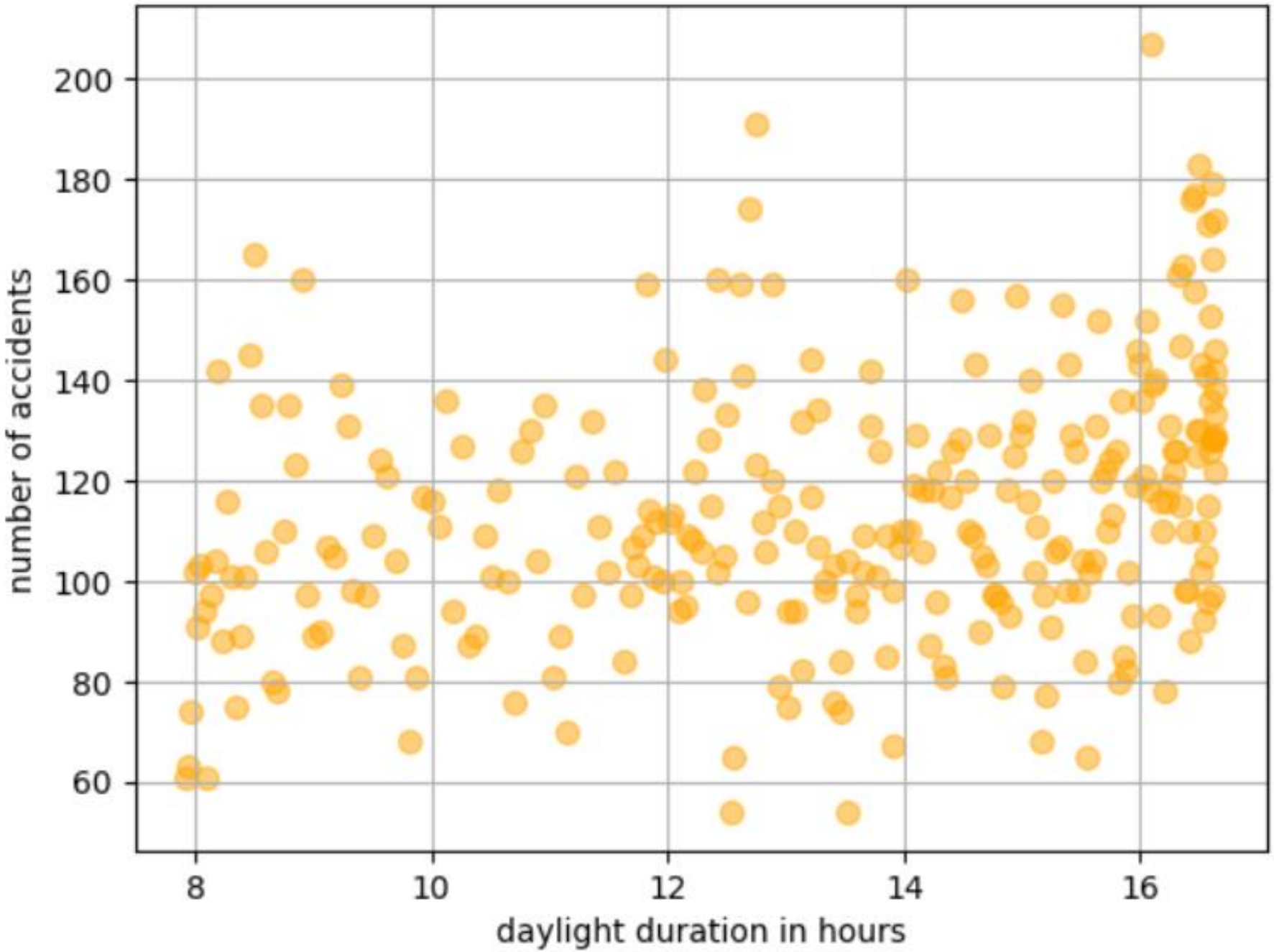


A teraz korelacje z pogodą (albo ich brak)

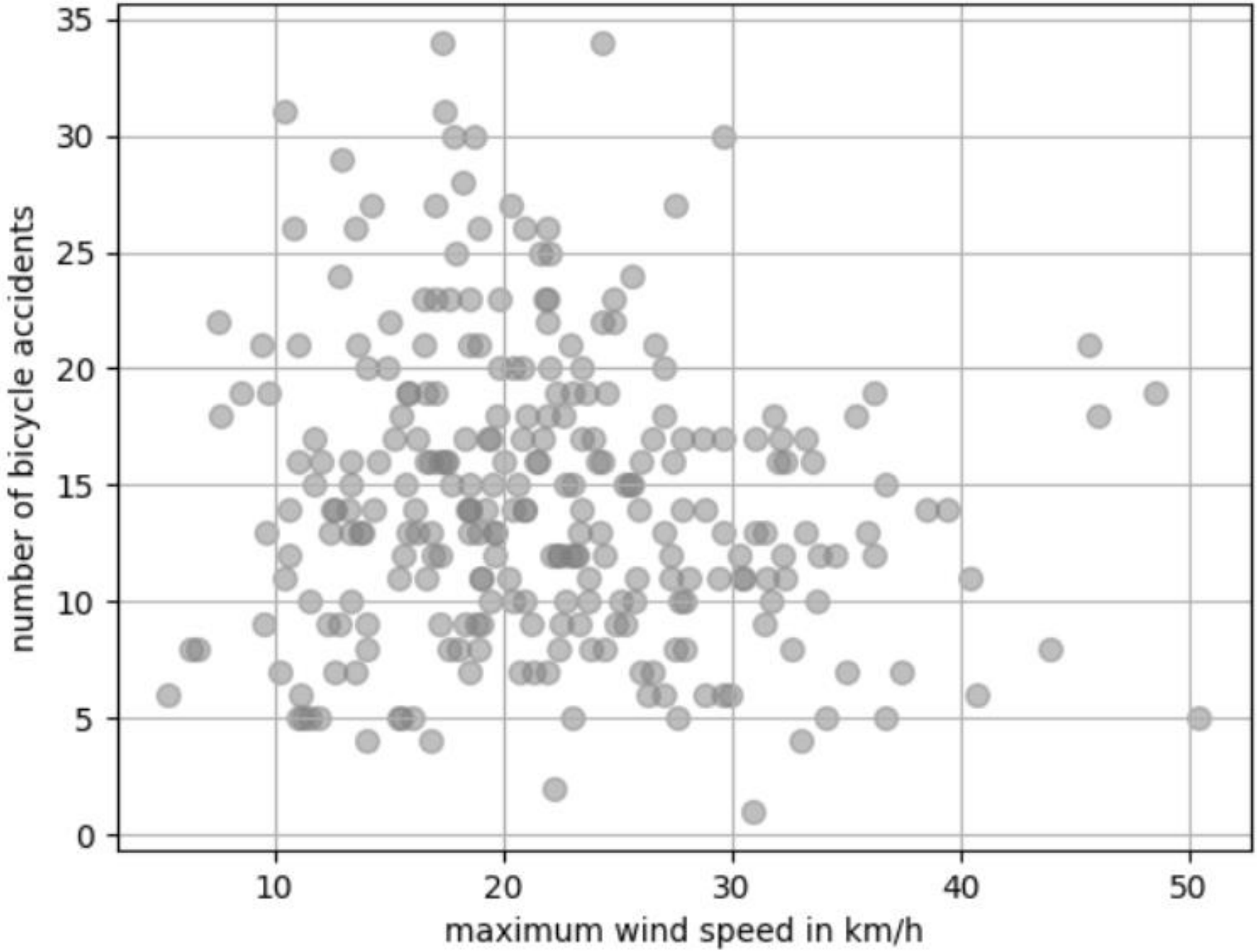

number of accidents
200
180
160
140
120
100
80
60
0
5
10
15
20
25
temperature

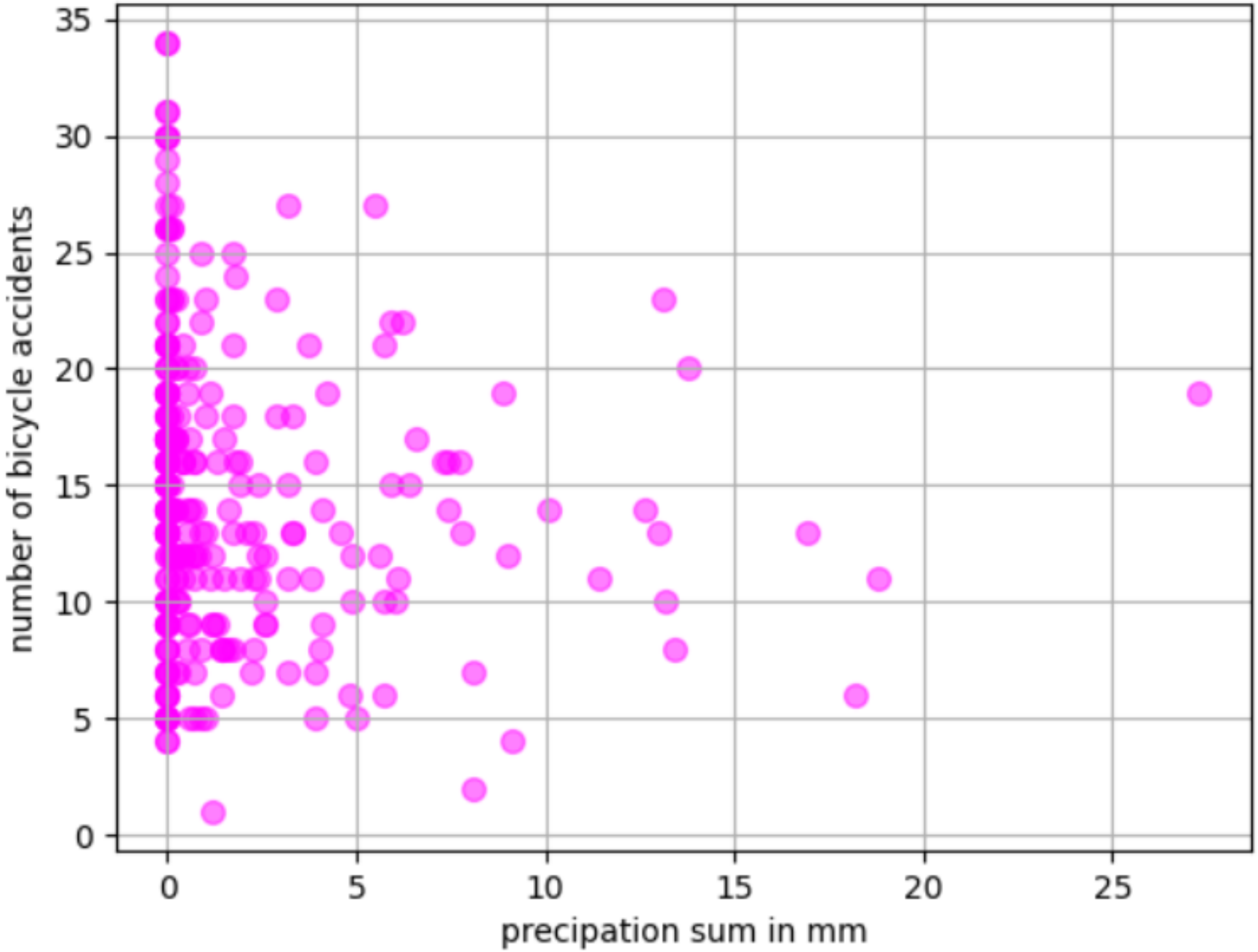

number of accidents
200
180
160
140
120
100
80
60
0
5
10
15
20
25
precipation sum in mm


number of accidents
200
180
160
140
120
100
80
60
10
20
30
40
50
maximum wind speed in km/h

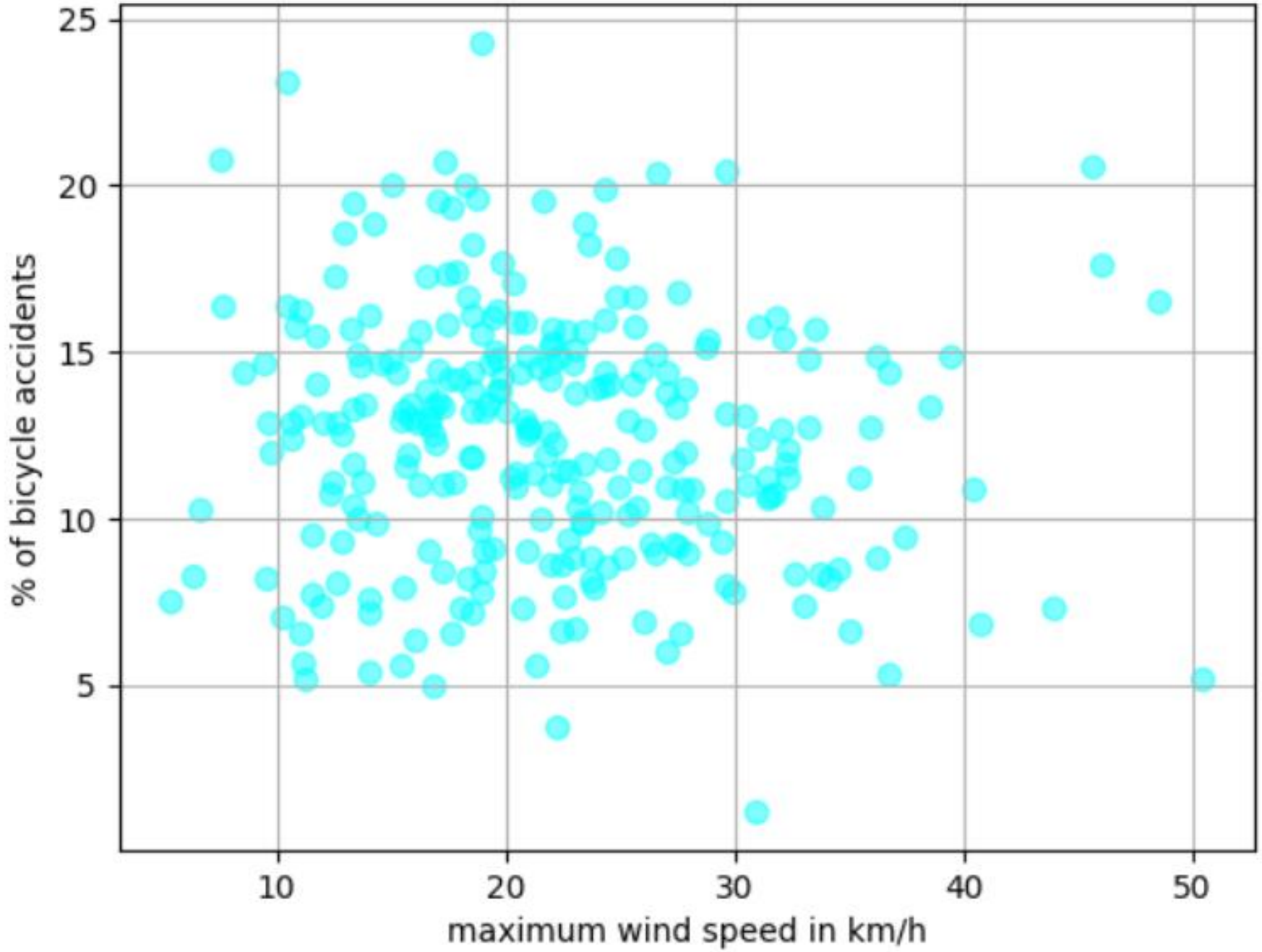

number of accidents
200
180
160
140
120
100
80
60
8
10
12
14
16
daylight duration in hours

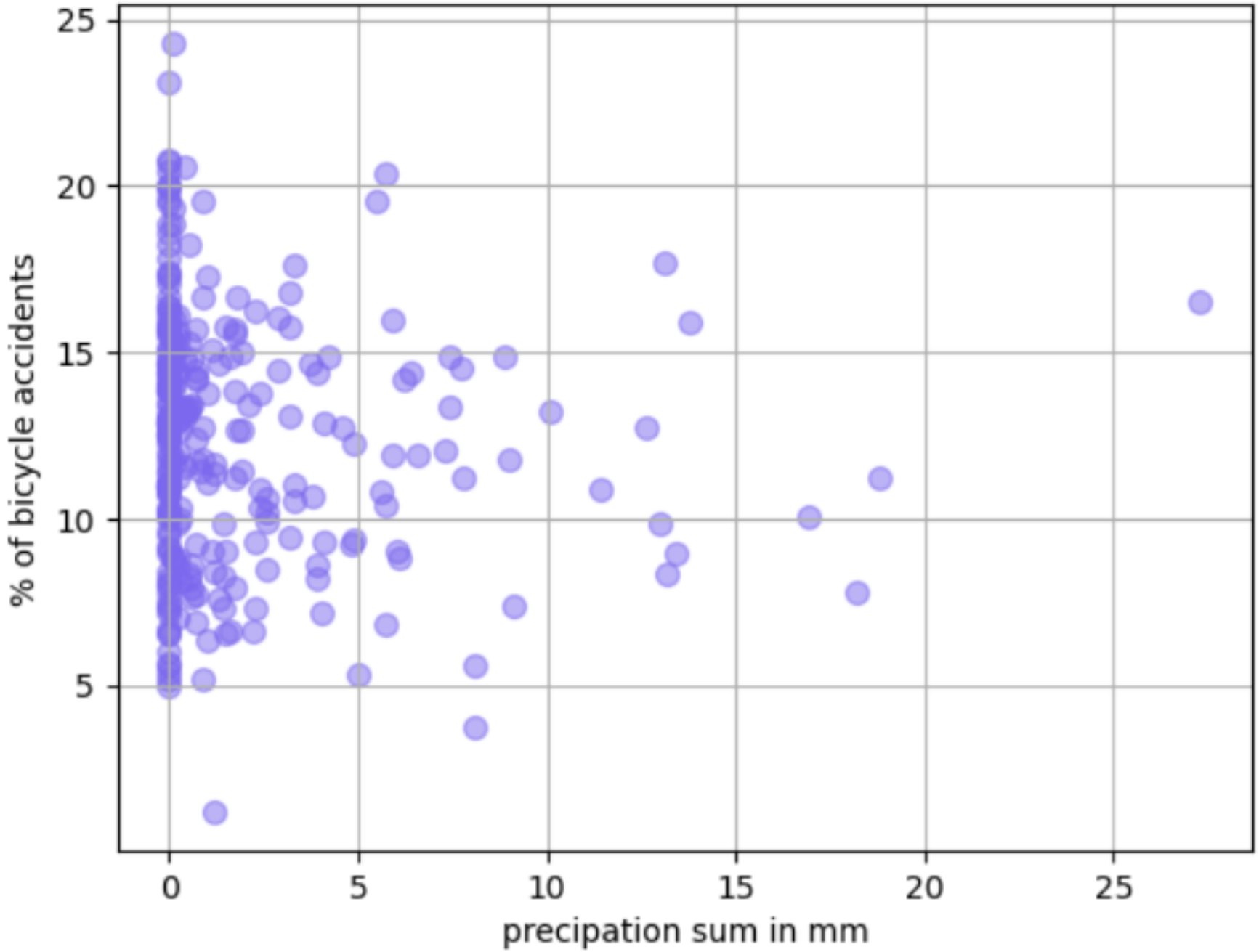
Niema korelacji?
Zbadamy najbardziej wrażliwy typ transportu!


number of bicycle accidents
0
5
10
15
20
25
30
35
10
20
30
40
50
maximum wind speed in km/h

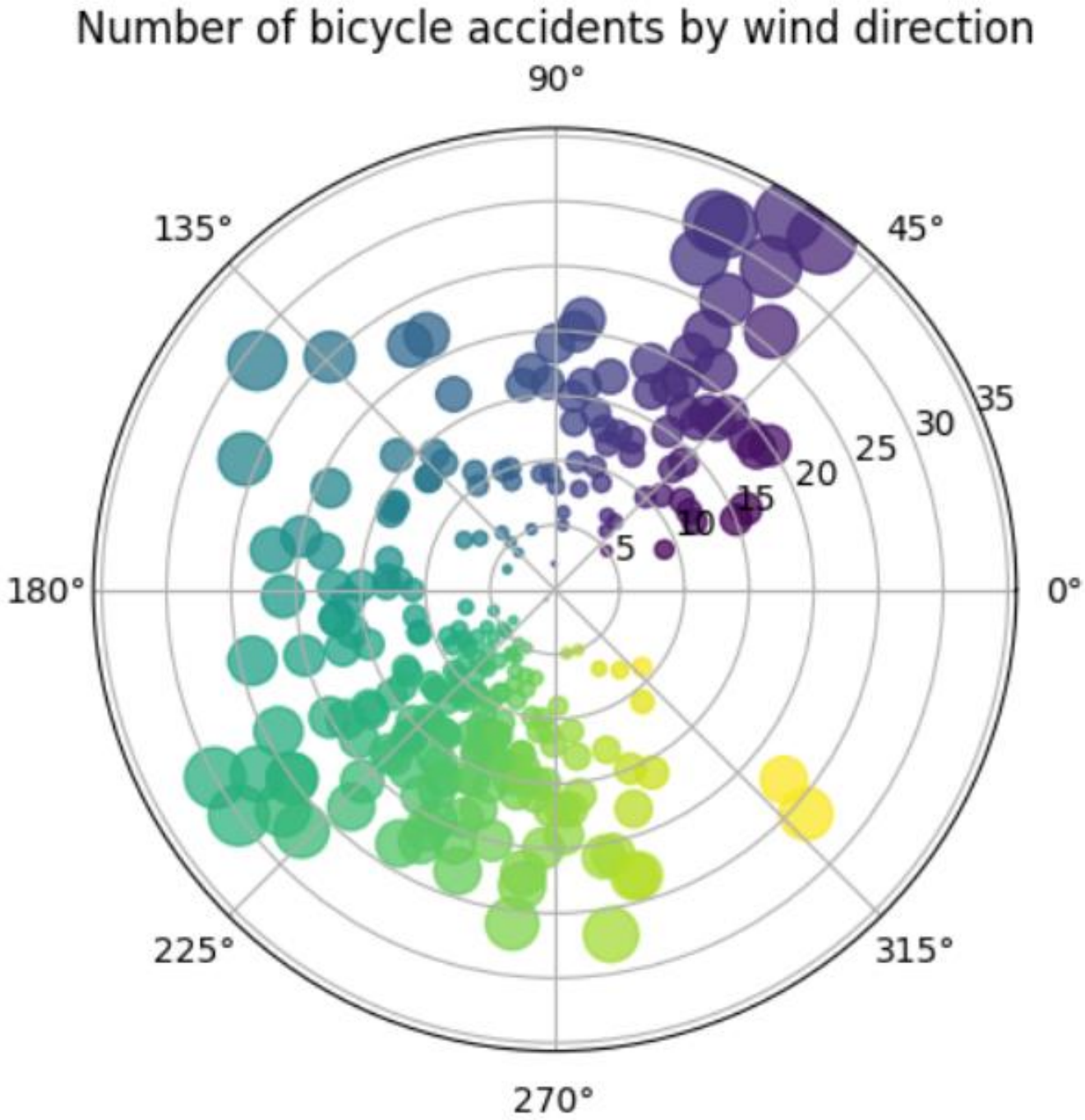

number of bicycle accidents
precipation sum in mm
0
5
10
15
20
25
30
35
0
5
10
15
20
25

Może przynajmniej frakcja zależy od pogody?


25
20
15
10
5
% of bicycle accidents
10
20
30
40
50
maximum wind speed in km/h


25
20
15
10
5
% of bicycle accidents
0
5
10
15
20
25
precipation sum in mm

Za dużo wykresów we współrzędnych kartezjańskich ☹


Number of bicycle accidents by wind direction
90°
135°
45°
180°
0°
225°
315°
270°
5
10
15
20
25
30
35

Podsumowując

Dziękujemy