

# Exploring the Impact of Weather and Climate on Bicycle Traffic in Köln

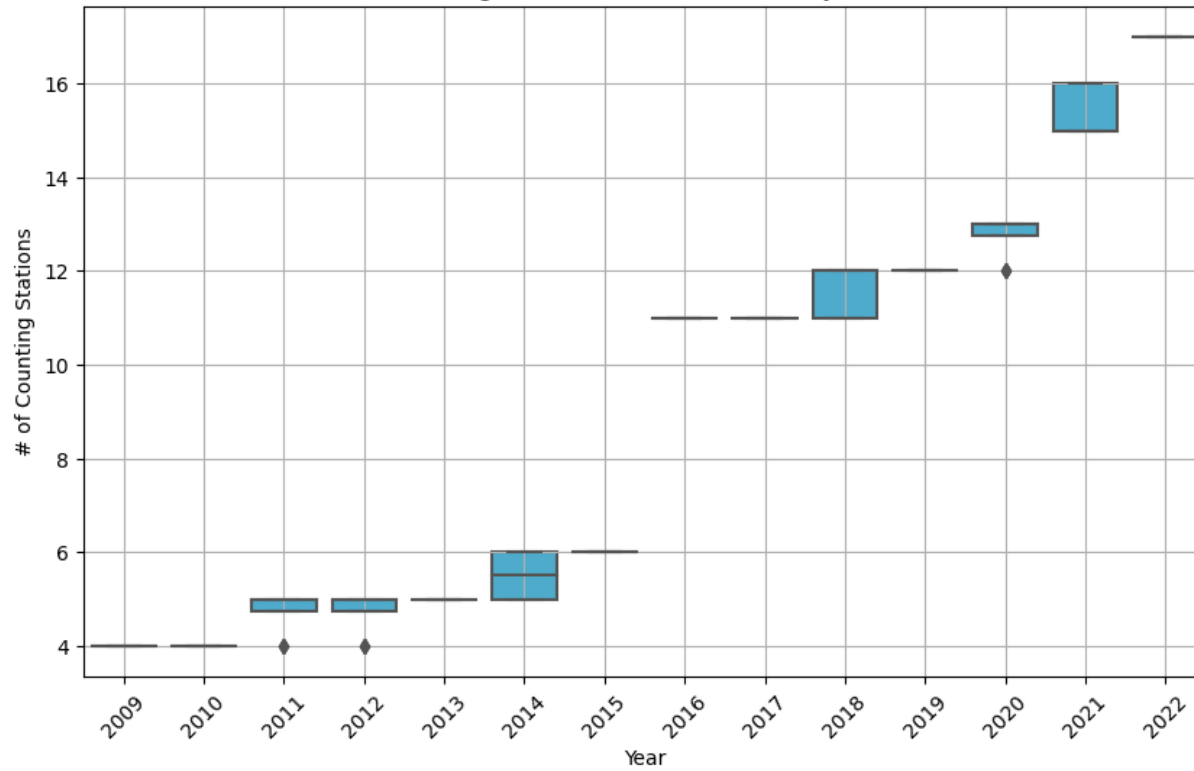
Presented by  
Sujit Debnath

# Data Source

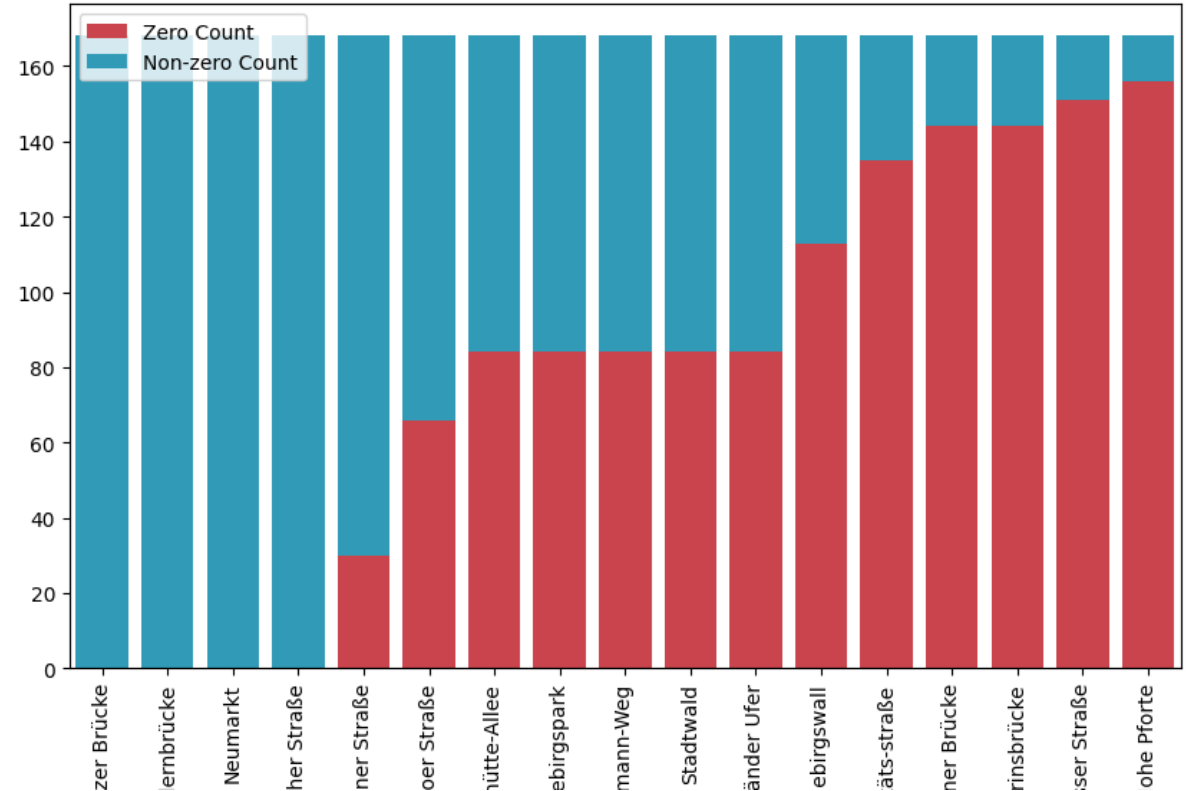
- Datasource1: Bicycle Traffic Data in Köln
  - Source: mobilithek
  - Metadata URL: <https://mobilithek.info/offers/-2236641647976866002>
  - Sample Data URL: [https://offenedaten-koeln.de/sites/default/files/Fahrrad\\_Zaehlstellen\\_Koeln\\_2016.csv](https://offenedaten-koeln.de/sites/default/files/Fahrrad_Zaehlstellen_Koeln_2016.csv)
  - Data Type: CSV
  - This data source contains Köln's bicycle traffic generated from several automatic counting stations throughout the city from 2009.
- Datasource2: Weather and Climate Data of Köln
  - Source: meteostat
  - Metadata URL: <https://dev.meteostat.net/bulk/monthly.html>
  - Sample Data URL: <https://bulk.meteostat.net/v2/monthly/{station}.csv.gz>, Station-id of Köln = '10513', 'D2968'
  - Data Type: CSV

# Data Exploration

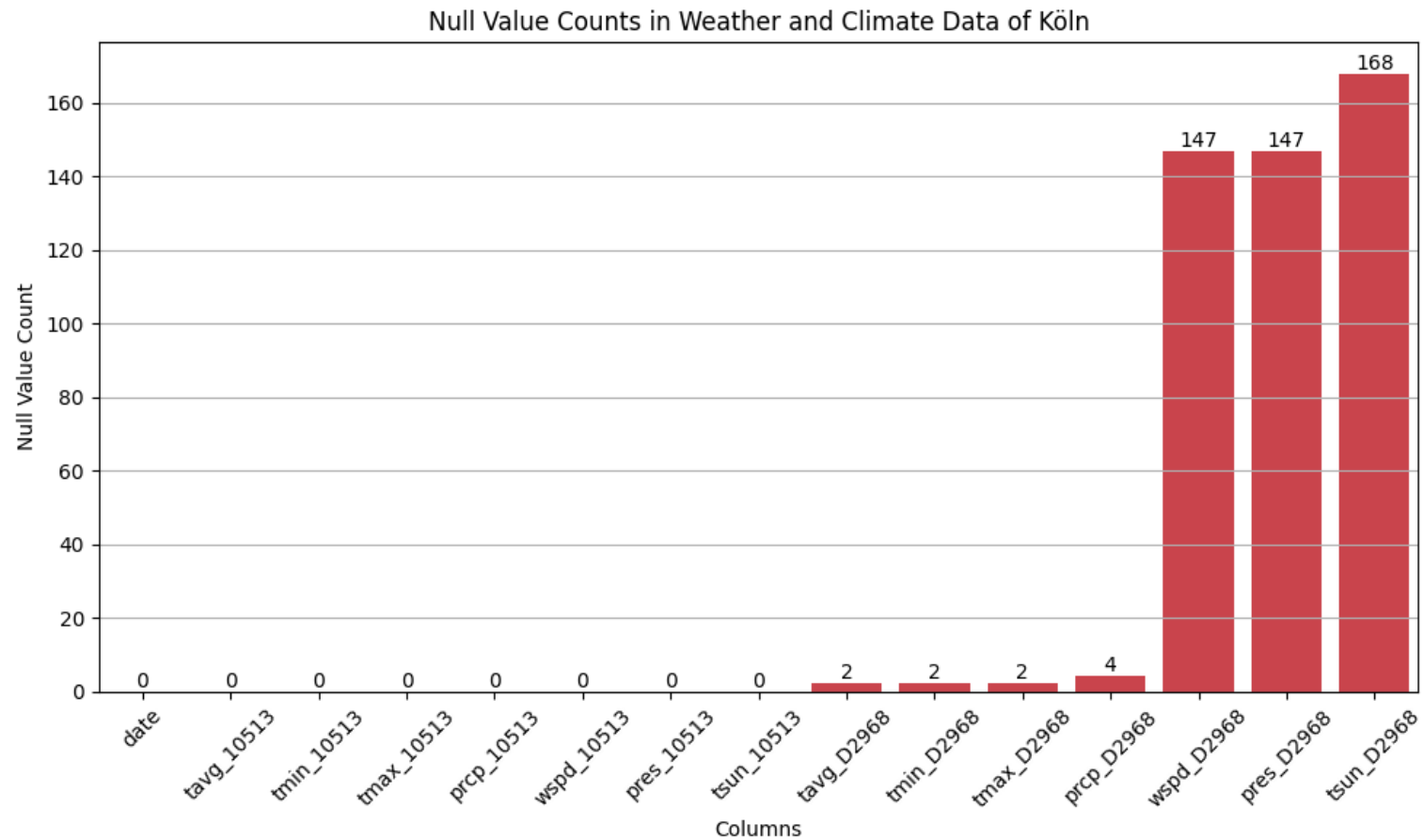
Number of Counting Stations with Recorded Bicycle Traffic in Köln



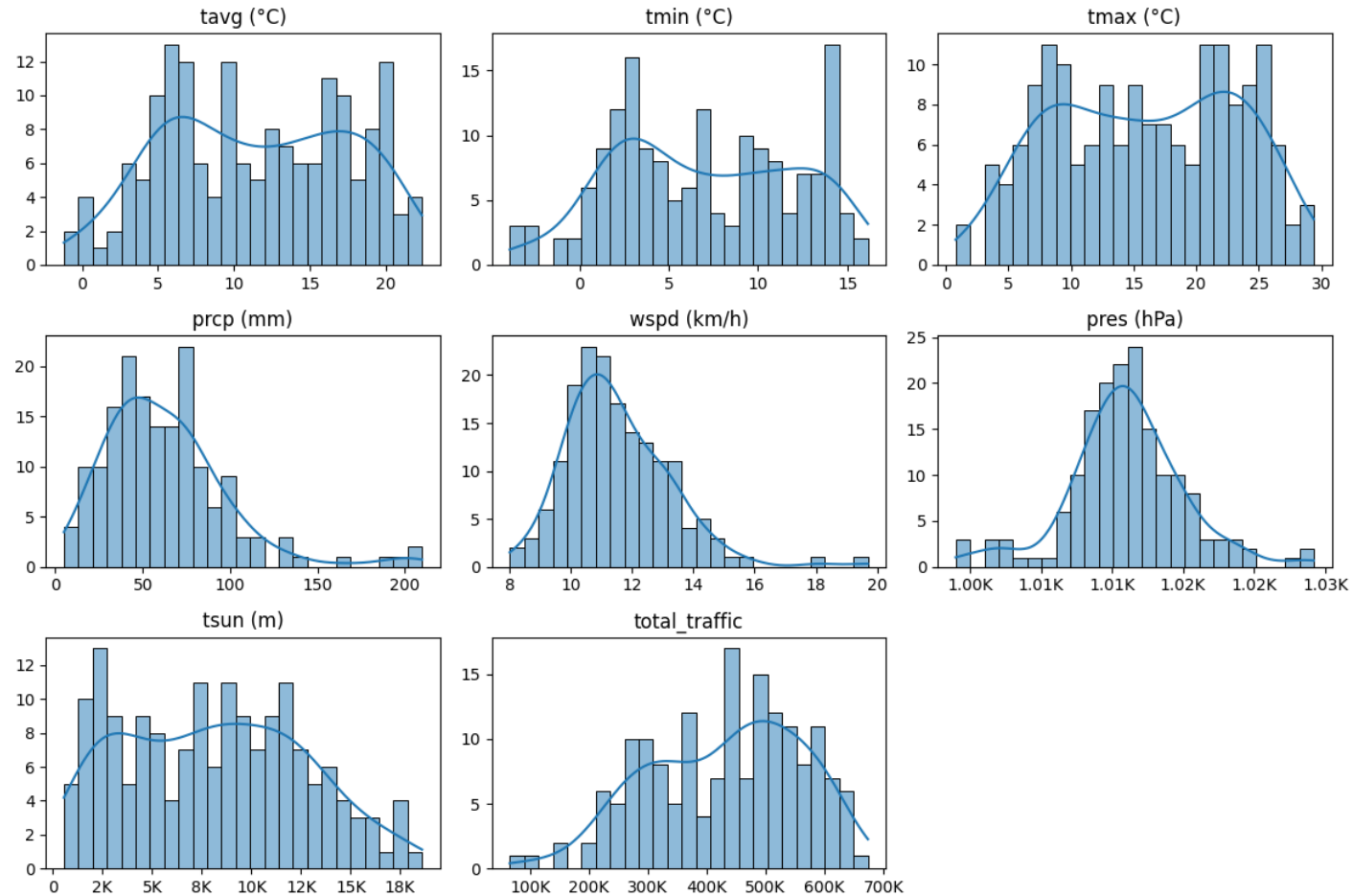
Zero Count vs Non-zero Count by Station



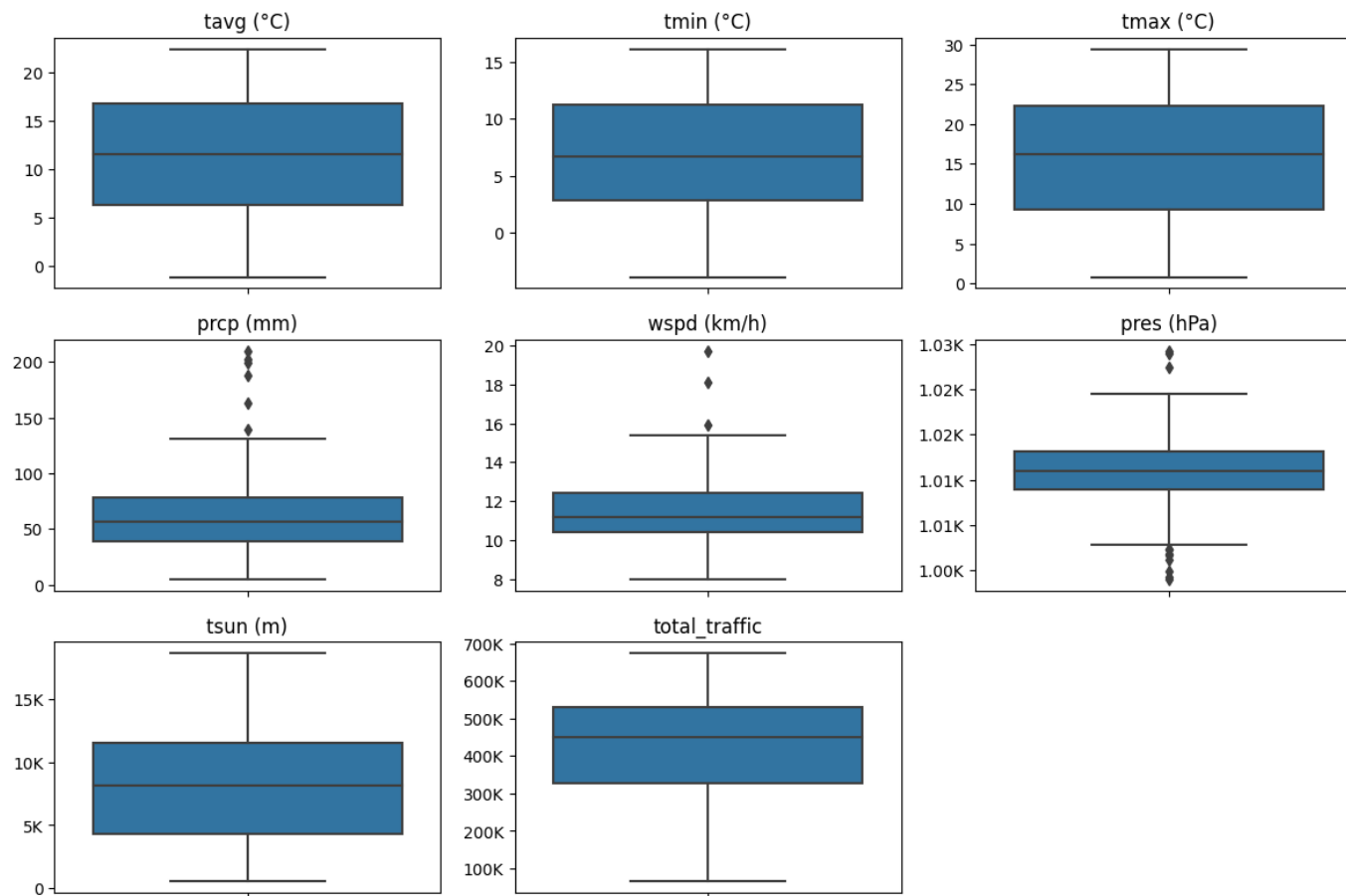
# Data Exploration



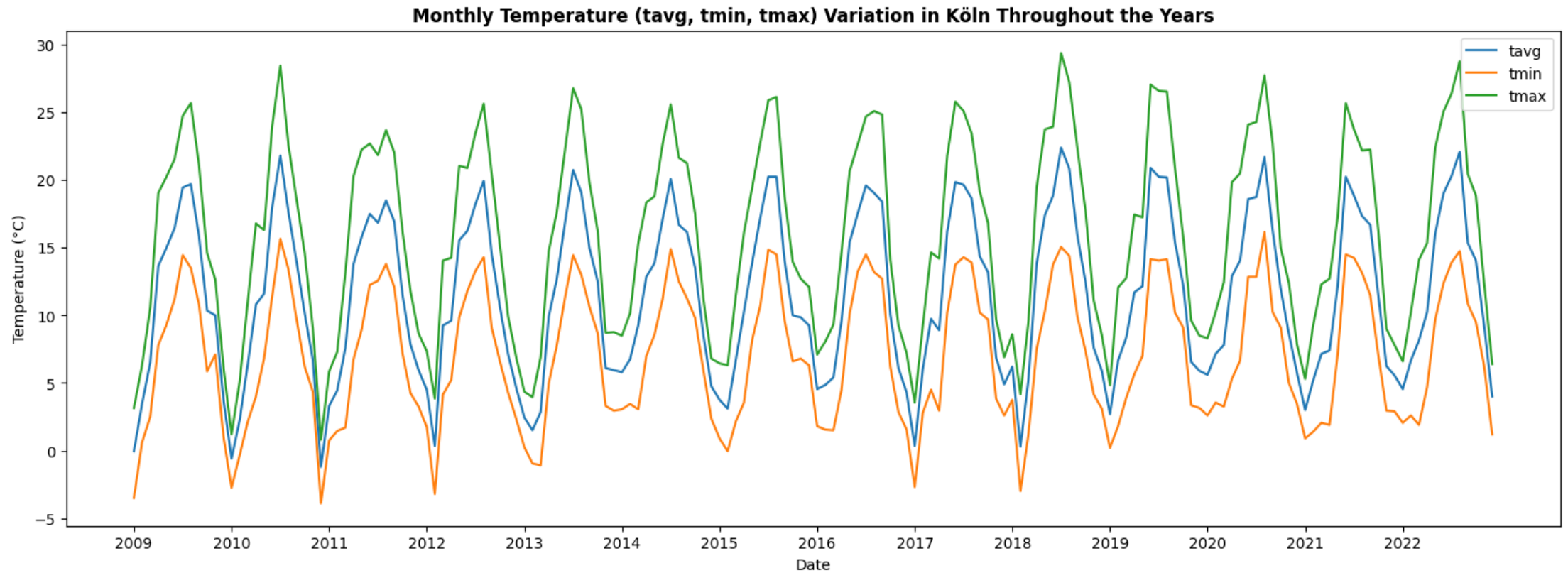
# Exploratory Data Analysis (EDA)



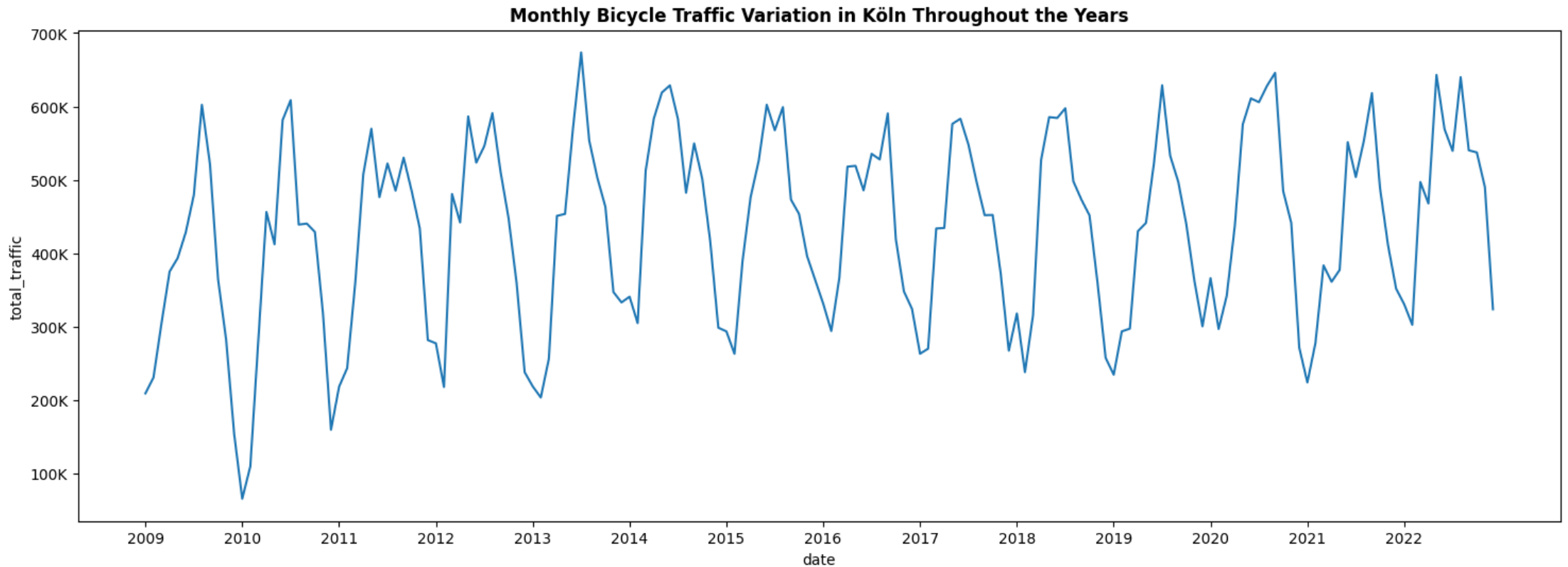
# EDA (cont.)



# How does the temperature in Köln city vary throughout the years?



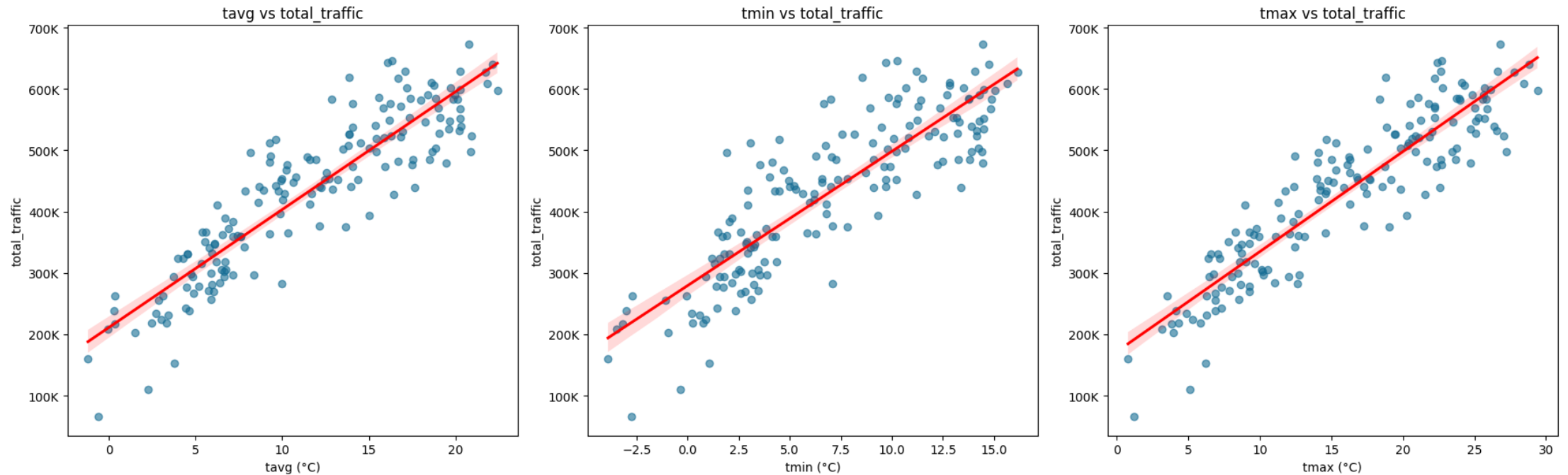
# How does the bicycle traffic in Köln city vary throughout the years?



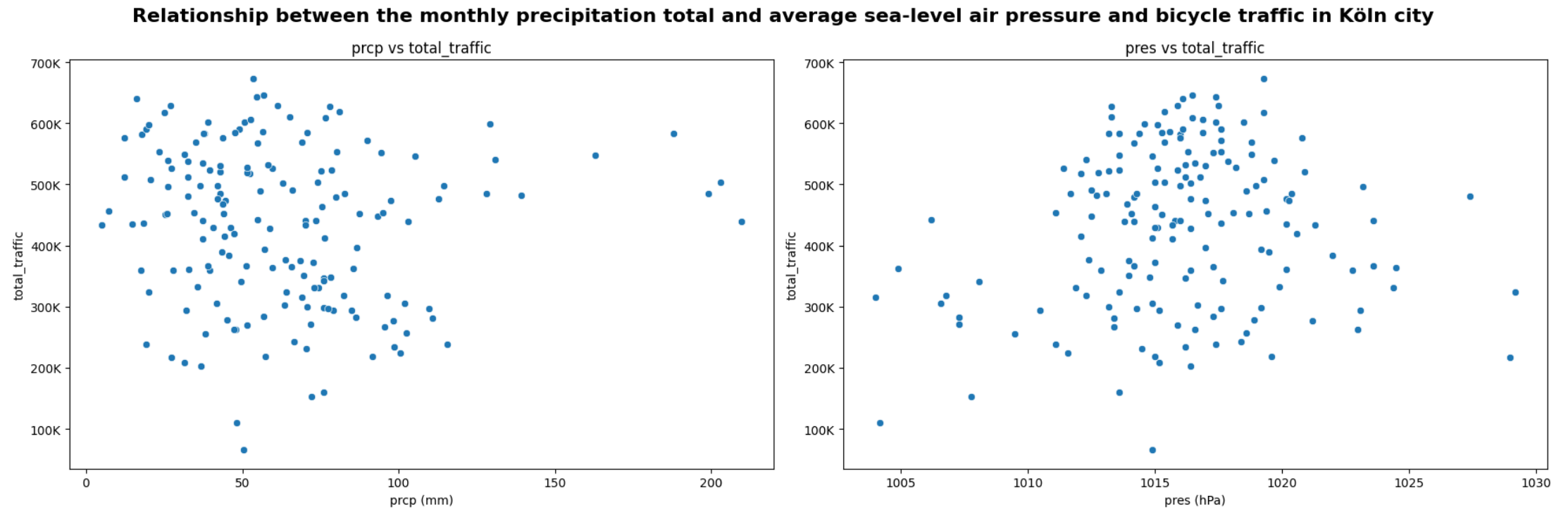


# Does temperature affect bicycle traffic in Köln city?

**Relationship between Temperature and Total Bicycle Traffic in Köln city**



# Is there any relation between the monthly precipitation total and average sea-level air pressure on the total bicycle traffic in Köln?



# How do wind speed and sunshine duration impact the total bicycle traffic in Köln?

**Relationship between the wind speed and duration of sunshine and bicycle traffic in Köln city**

