

Rainfall, Bikers, and Border Crossings

What is the correlation between rainfall in Constance and the border crossings in Constance?



Data

Analysis

Further
Insights

Form of the Data

- 2 Data sets
- Composed out of multiple files

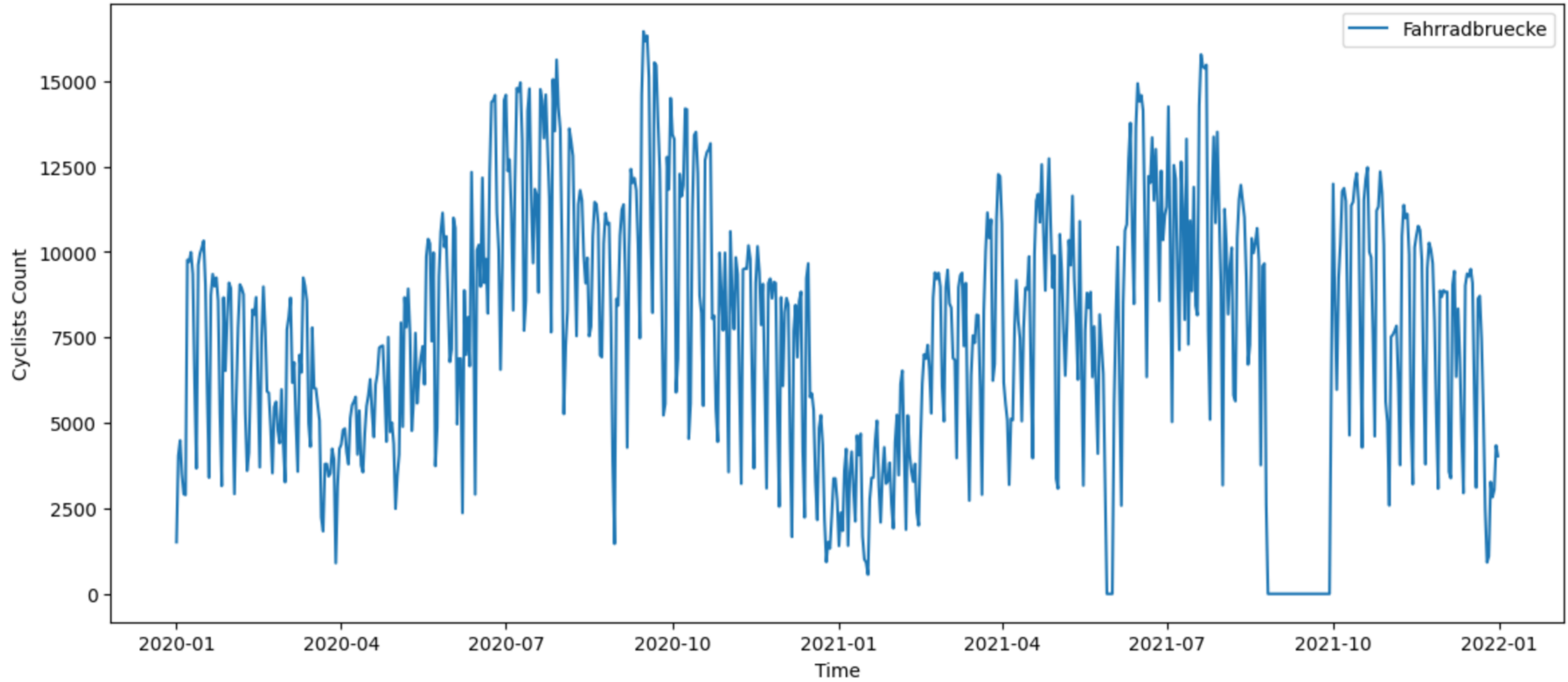


Cyclists

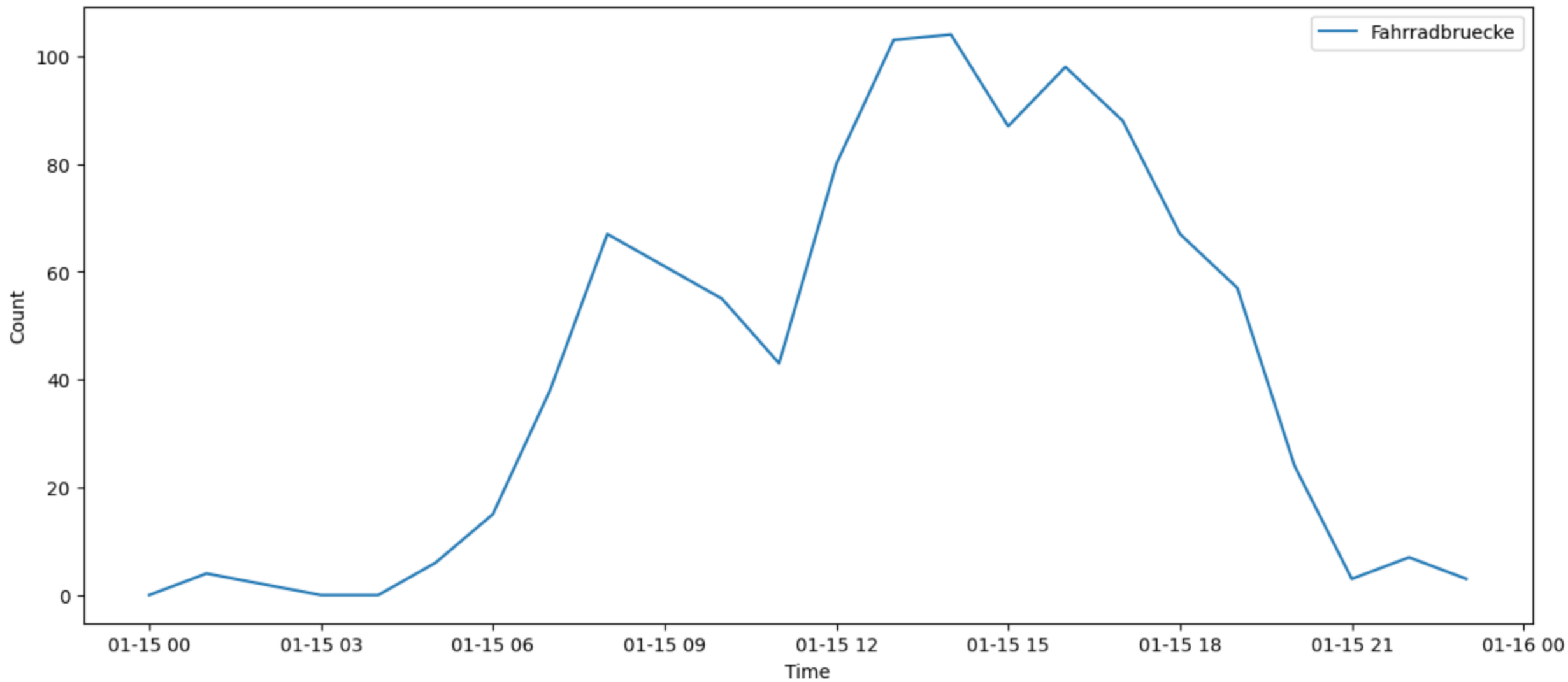


Border
Crossings

Time Series Plot (Daily Aggregate)



Time Series Plot for 2021-01-15



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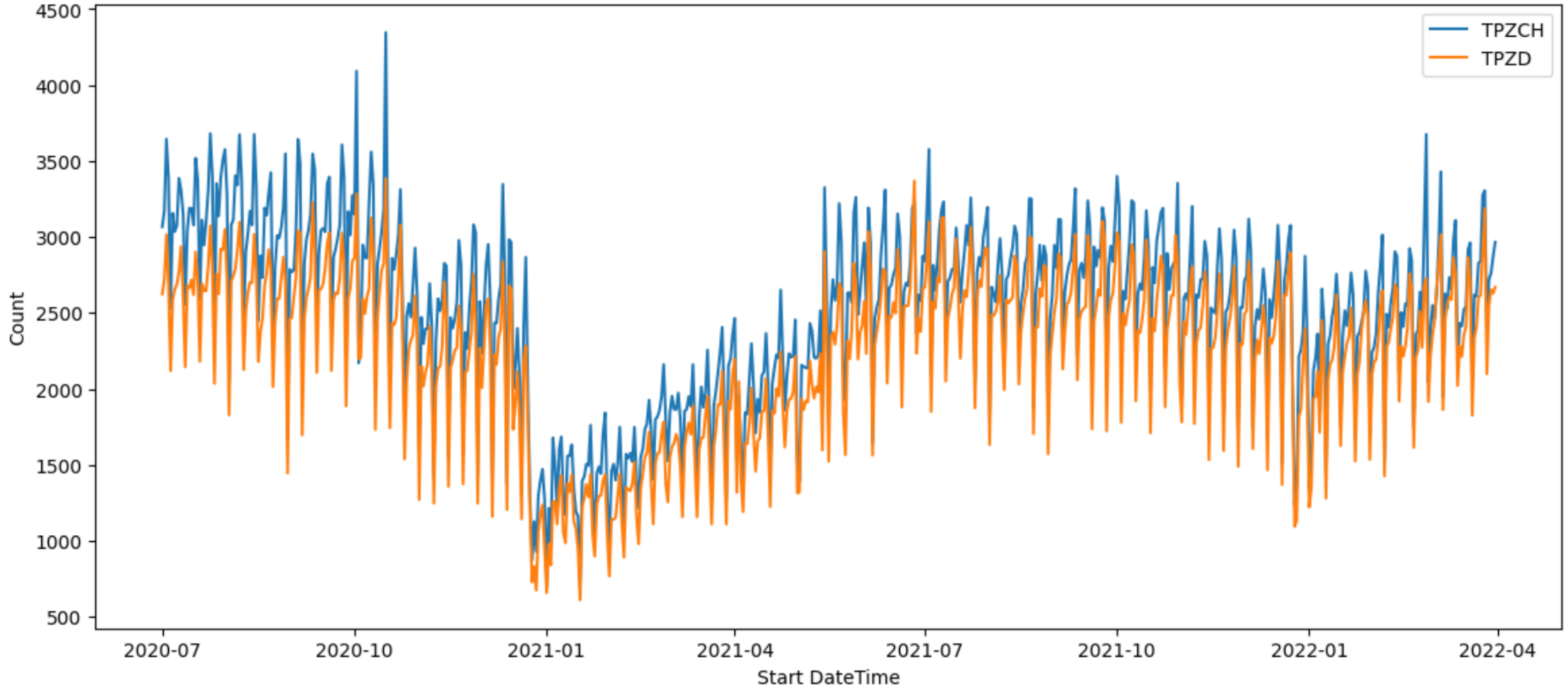


Cyclists

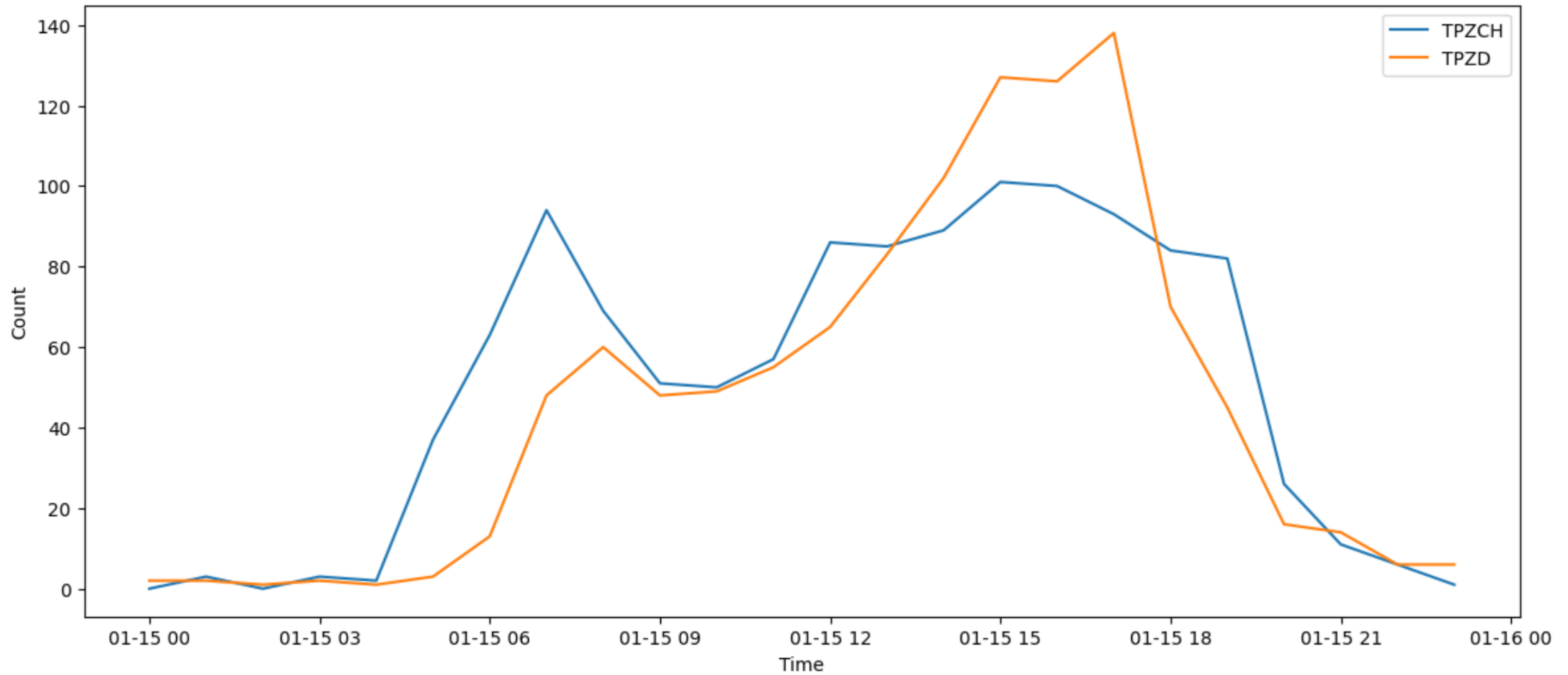


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Time Series Plot for 2021-01-15



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Answering the question

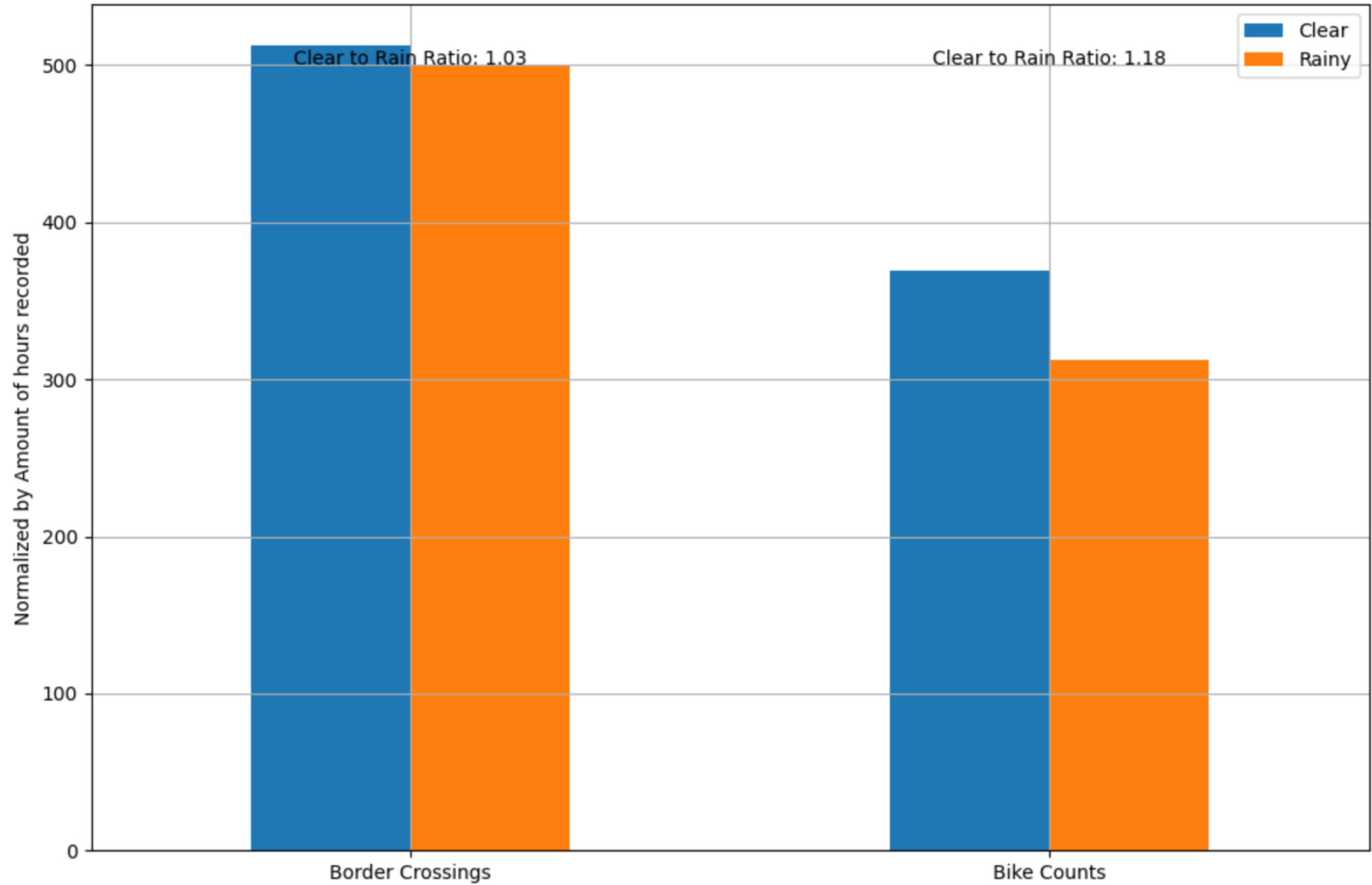
What is the correlation between the amount of rainfall in Constance and the amount of border crossings in Constance?

- There are only negligible less boarder crossings during rainy hours than during clear hours.
- It is highly likely that the amount of rainfall and the amount of border crossings in Constance are independent.

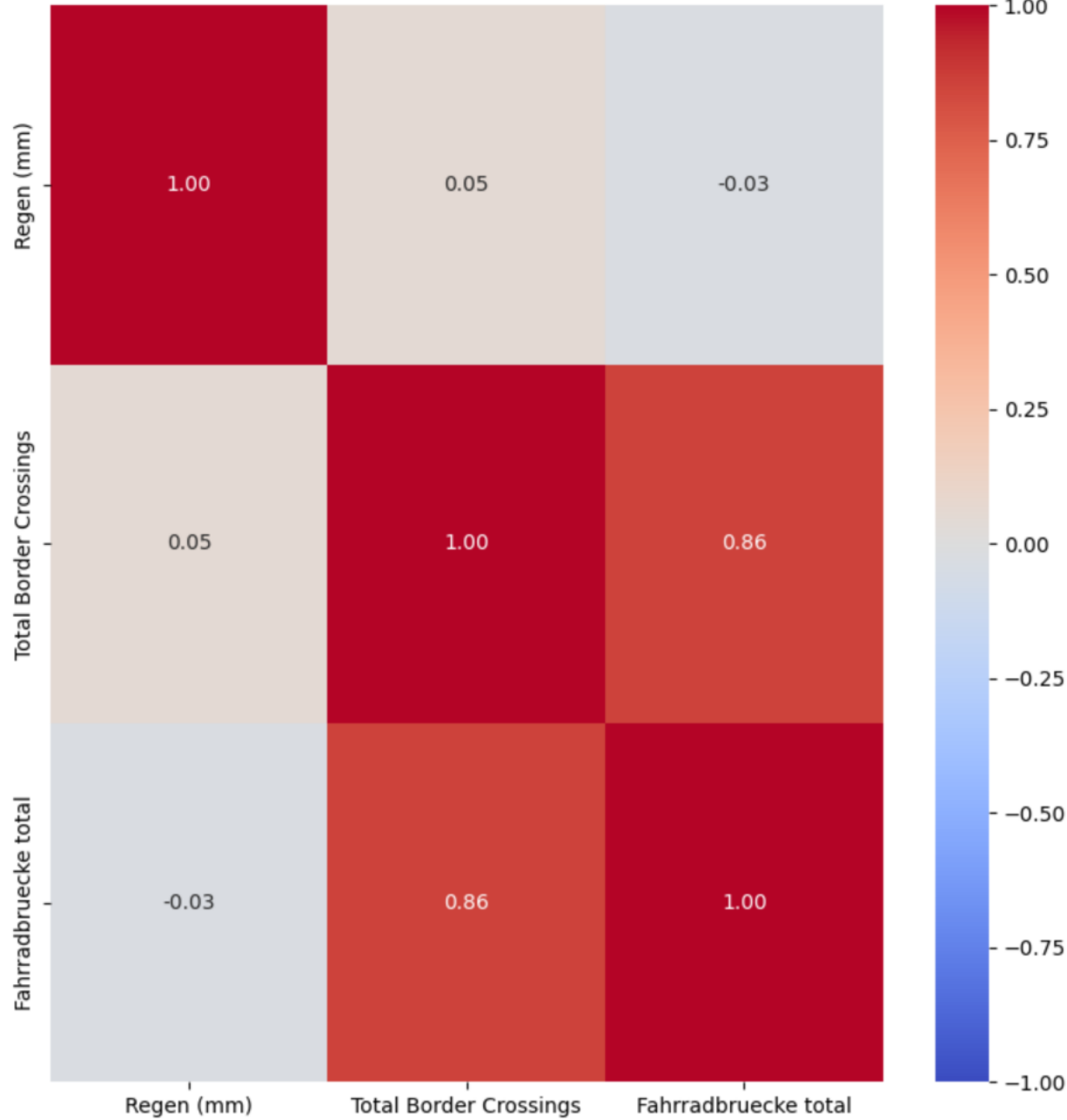
Main Question

Further Questions

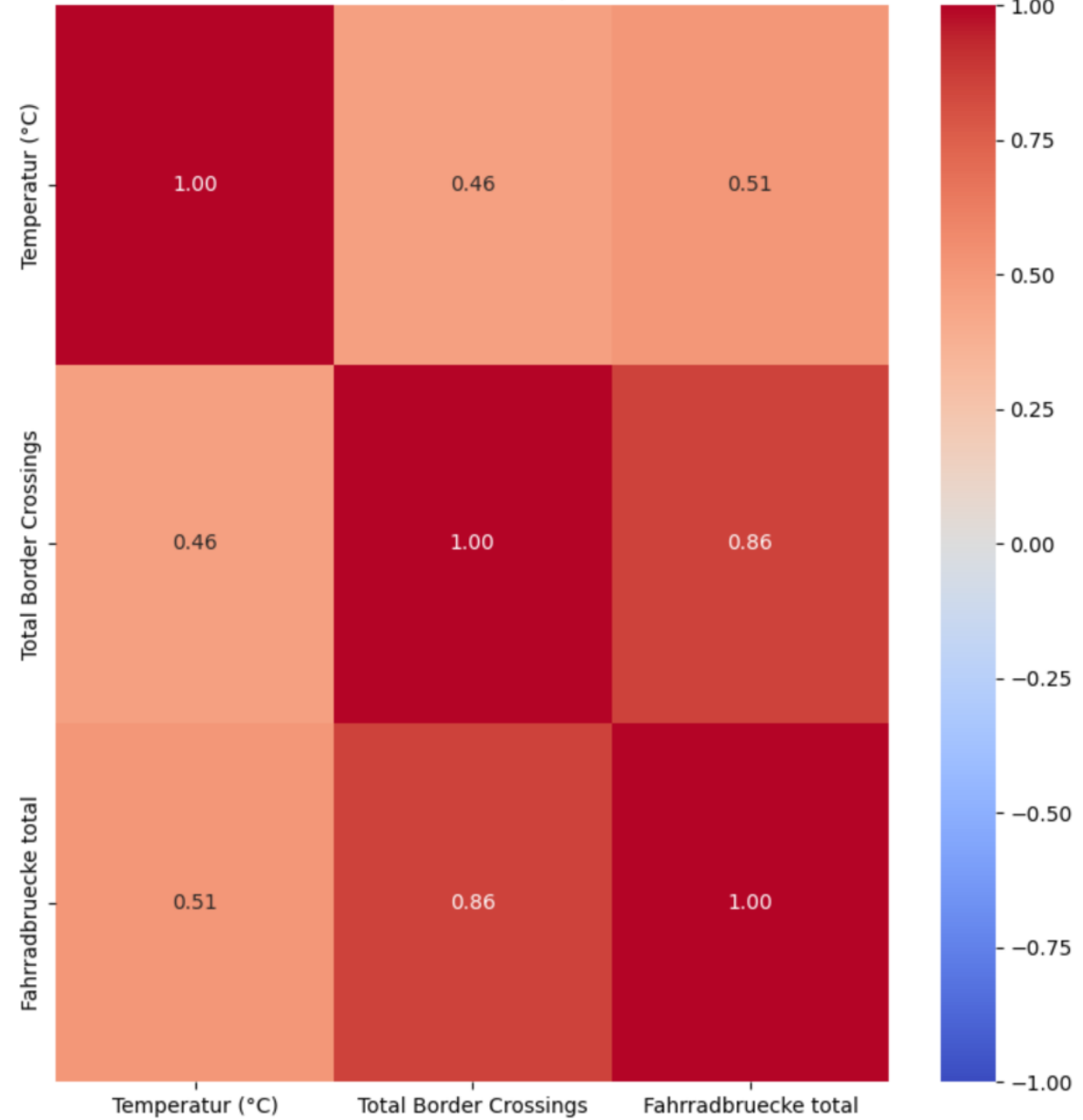
Normalized Border Crossings and Bike Counts During Clear and Rainy Weather



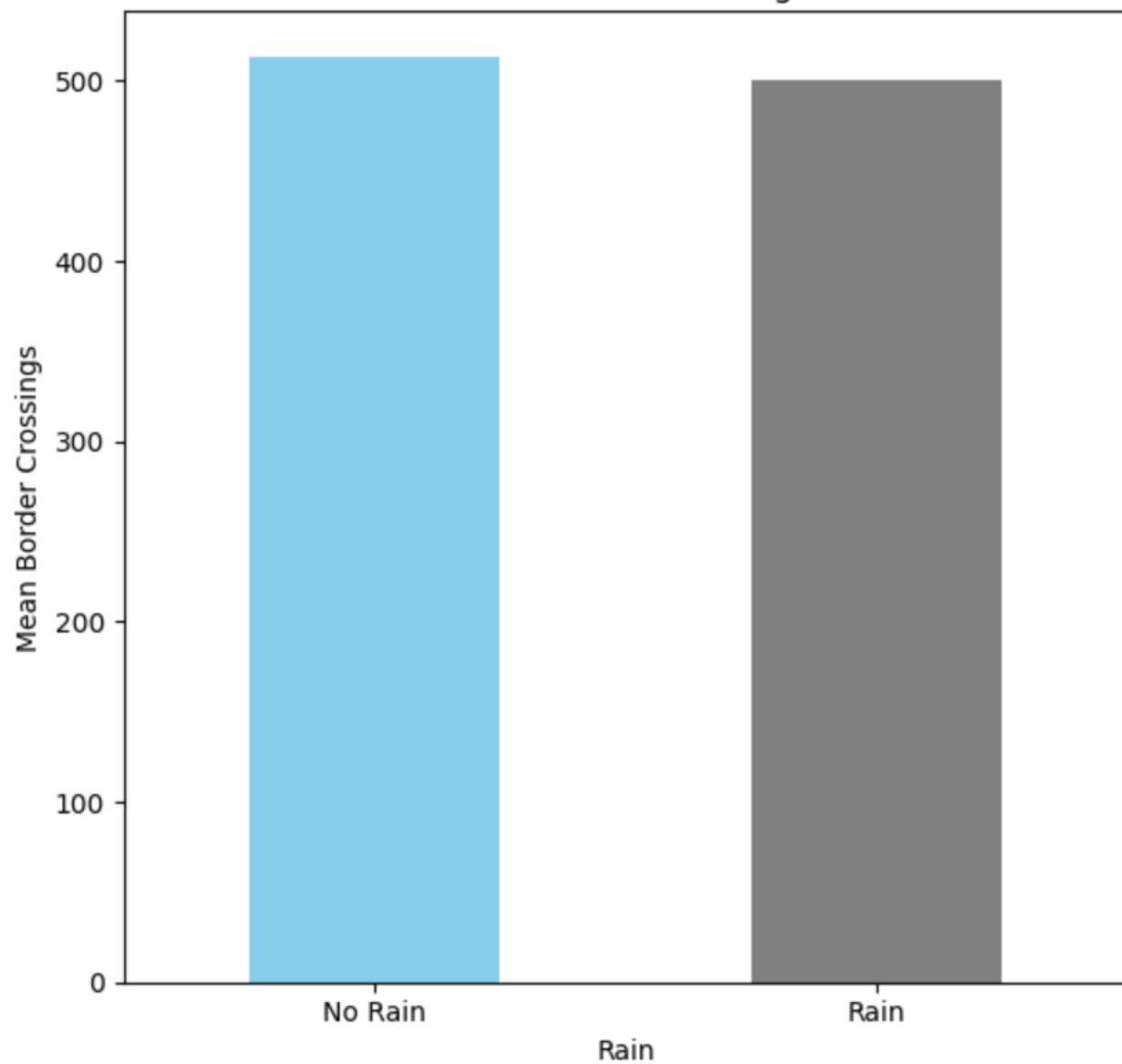
Correlation Matrix Rain



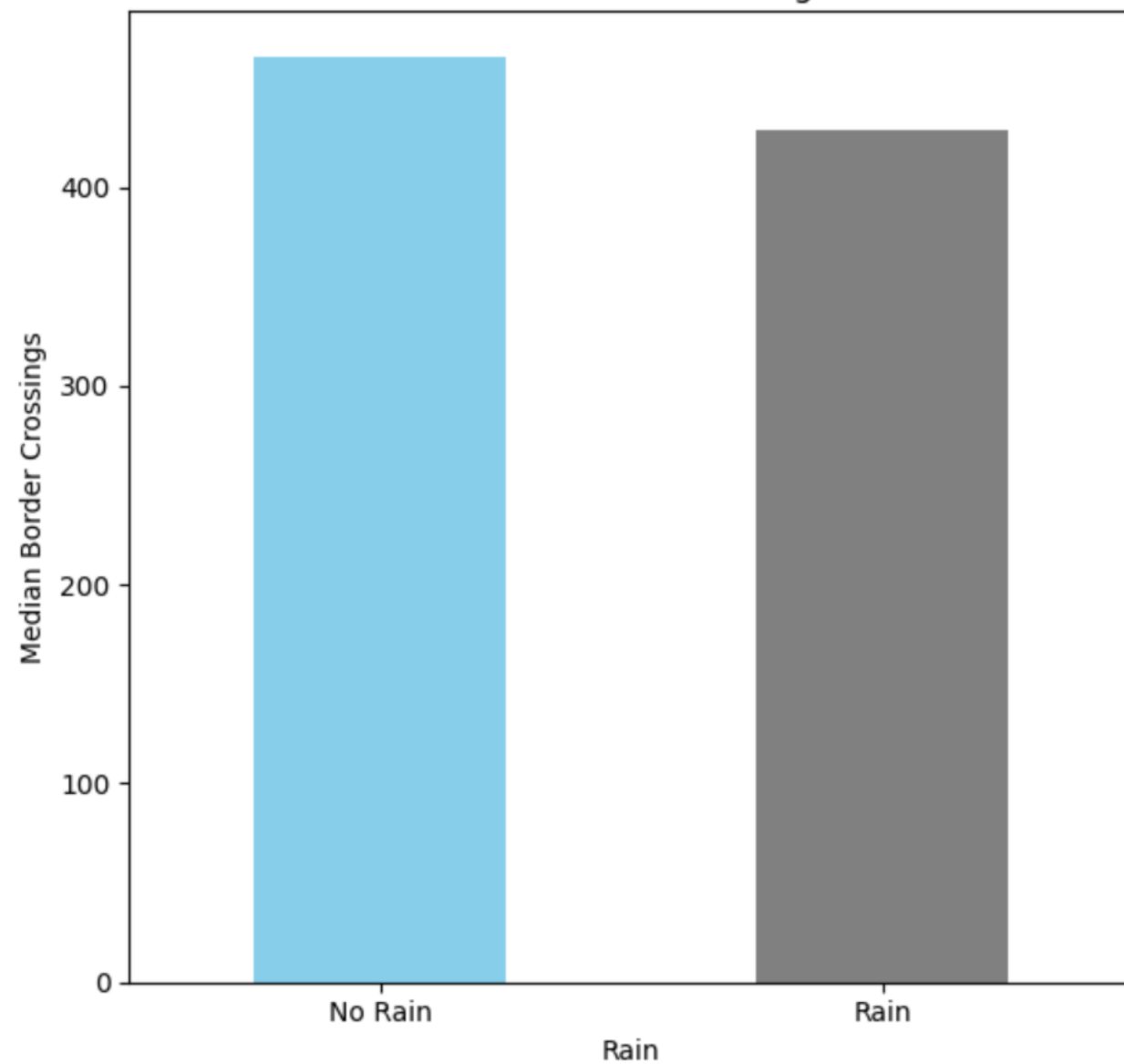
Correlation Matrix Temperature



Mean Border Crossings



Median Border Crossings



Answering the question

What is the correlation between the amount of rainfall in Constance and the amount of border crossings in Constance?

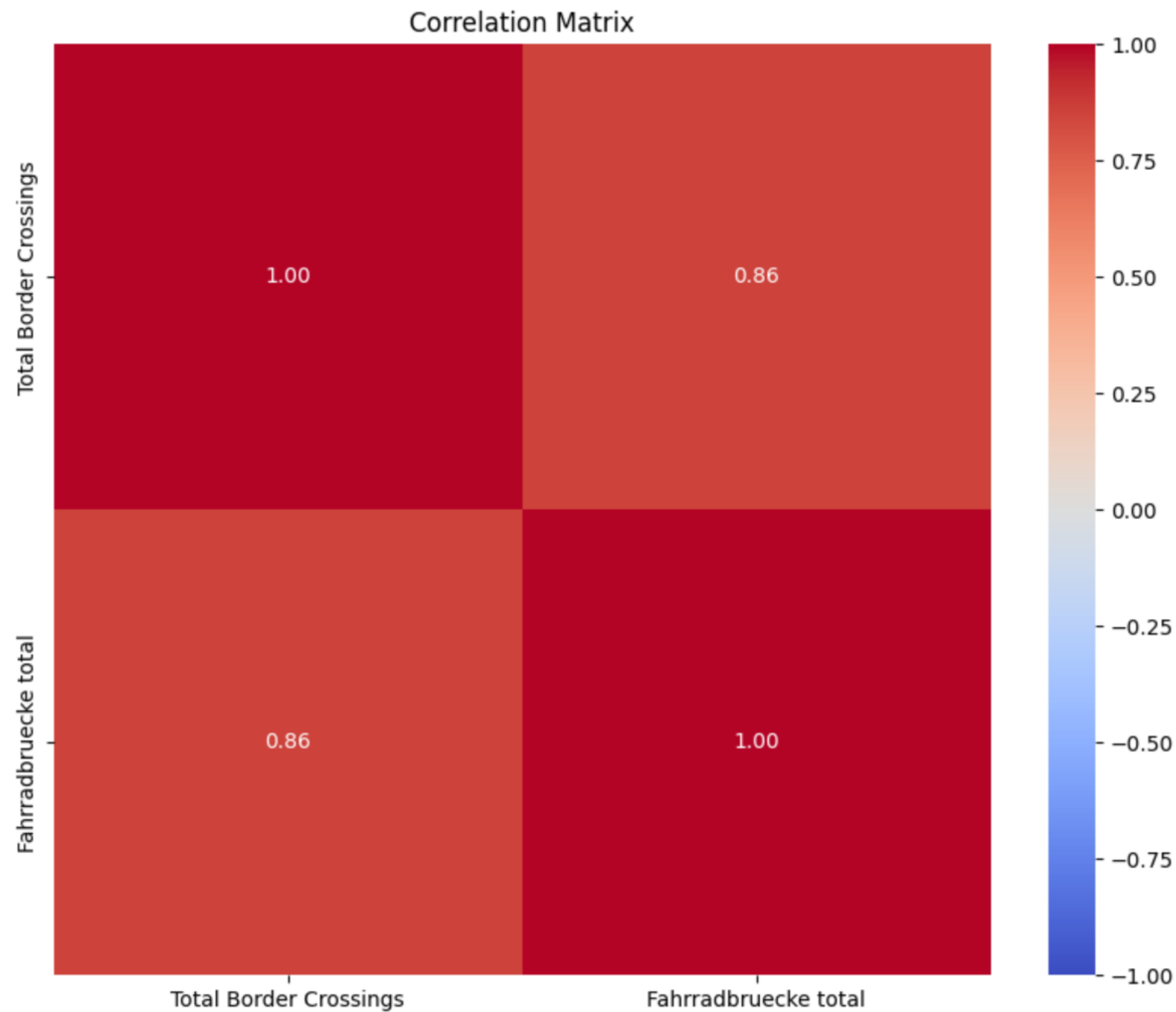
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- It is highly likely that the amount of rainfall and the amount of border crossings in Constance are independent.

Main Question

Further Questions

Further Questions

- Are there less border crossings on sunny days?
- Are there less border crossings on days when many bikers are on the roads in Constance?
- Or is there no meaningful correlation at all?



Further Questions

- Are there less border crossings on sunny days?
→ not related!
- Are there less border crossings on days when many bikers are on the roads in Constance?
→ quite the opposite is the case!
- Or is there no meaningful correlation at all?
→ This is the case.

Answering the question

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Main Question

Further Questions

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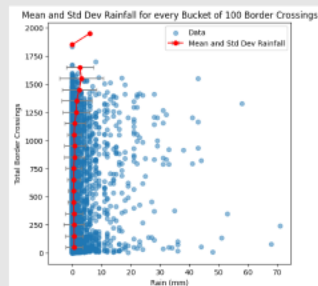
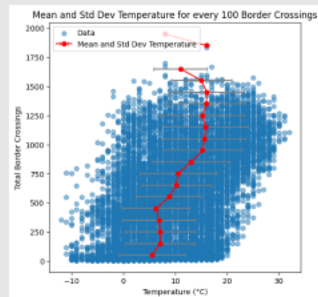
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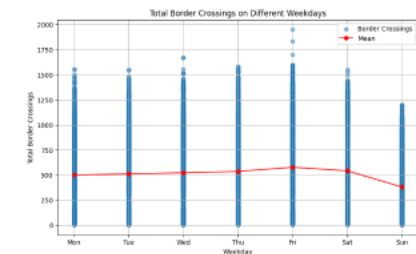
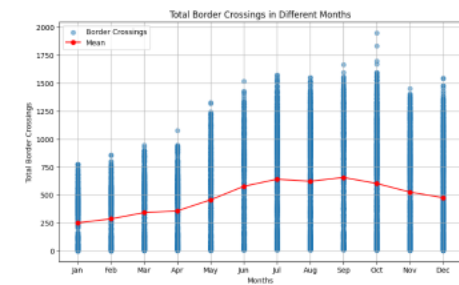
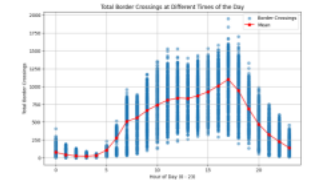
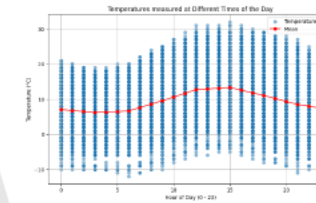
Further
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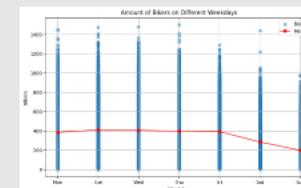
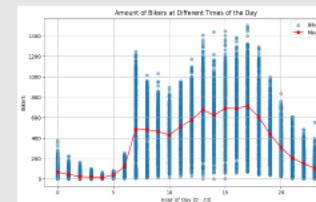
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Boarder Crossings



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