

District Wise Daily Climate Data

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Introduction

Subject:

Climate Data

Objective:

Spatio Temporal **Visualization**

Explore **Interesting Correlations**

About

Source: [District Wise Climate Data for Nepal - OpenDataNepal](#)

Date: 1981-01-01 to 2019-12-31

No of Rows: 4,41,564

No of Columns: 21

Interval: Daily

No of Parameters: 18

18 Parameters

DATE

PRECTOT

T2M_MAX

WS10M_MIN

DISTRICT

PS

T2M_MIN

WS10M_RANGE

LAT

QV2M

T2M_RANGE

WS50M

LON

RH2M

TS

WS50M_MAX

T2M

WS10M

WS50M_MIN

T2MWET

WS10M_MAX

WS50M_RANGE

Parameters

1. **WS10M**: Wind Speed at 10 Meters (m/s)
2. WS10M_MAX: Maximum Wind Speed at 10 Meters (m/s)
3. WS10M_MIN: Minimum Wind Speed at 10 Meters (m/s)
4. WS10M_RANGE: Wind Speed Range at 10 Meters (m/s)
5. WS50M: Wind Speed at 50 Meters (m/s)
6. WS50M_MAX: Maximum Wind Speed at 50 Meters (m/s)
7. WS50M_MIN: Minimum Wind Speed at 50 Meters (m/s)
8. WS50M_RANGE: Wind Speed Range at 50 Meters (m/s)

Parameters

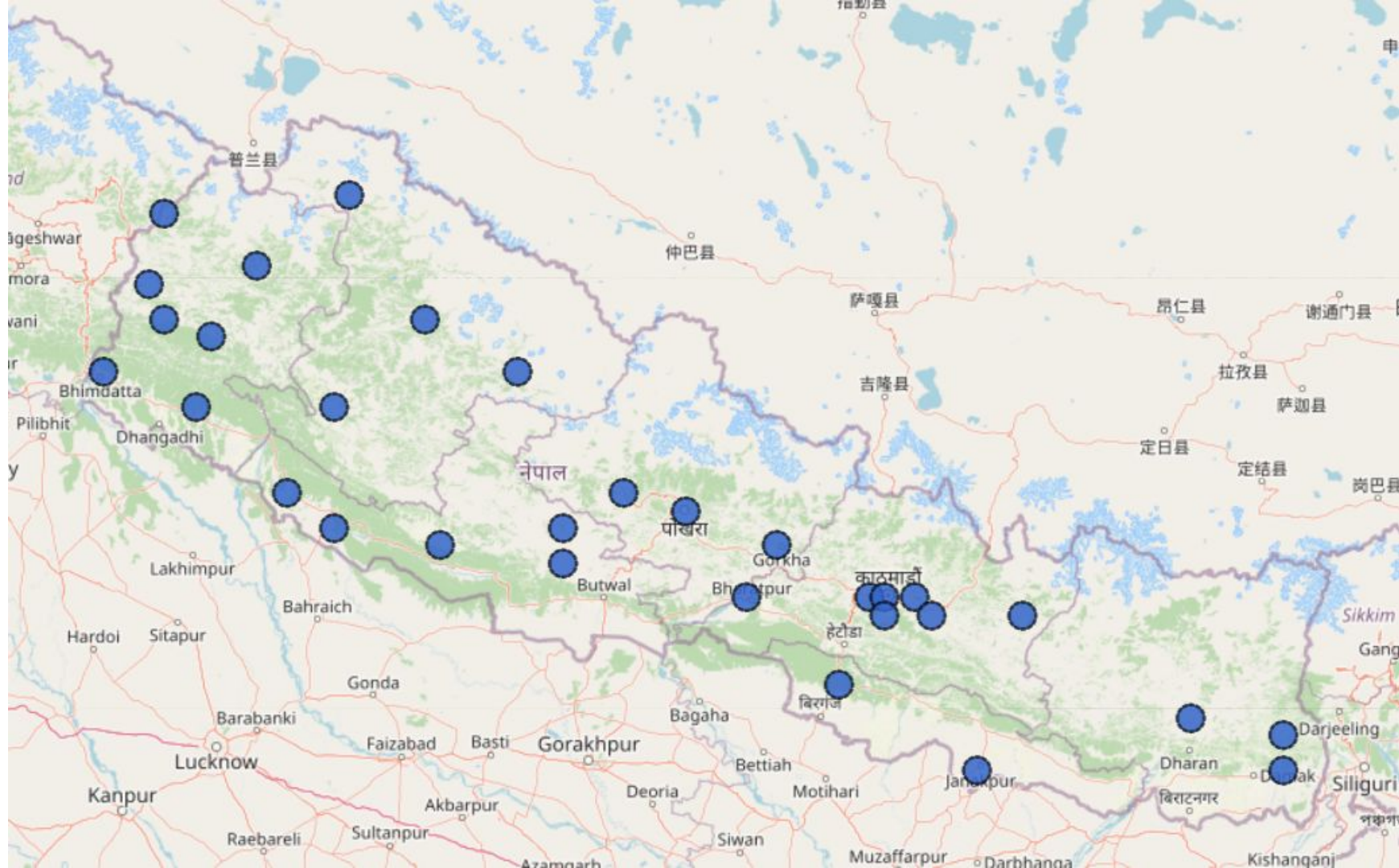
- 9. **PRECTOT**: Precipitation (mm day⁻¹)
- 10. **PS**: Surface Pressure (kPa)
- 11. **QV2M**: Specific Humidity at 2 Meters (g/kg)
- 12. **RH2M**: Relative Humidity at 2 Meters (%)
- 13. **T2M**: Temperature at 2 Meters (C)
- 14. **T2MWET**: Wet Bulb Temperature at 2 Meters (C)
- 15. **T2M_MAX**: Maximum Temperature at 2 Meters (C)
- 16. **T2M_MIN**: Minimum Temperature at 2 Meters (C)
- 17. **T2M_RANGE**: Temperature Range at 2 Meters (C)
- 18. **TS**: Earth Skin Temperature (C)

32 District

Sankhuwasabha
Saptari
Sarlahi
Sindhuli
Solukhumbu
Sunsari
Surkhet
Syangja
Tanahun
Taplejung
Terhathum

Lamjung
Mahottari
Makwanpur
Manang
Morang
Mugu
Mustang
Myagdi
Nawalparasi
Nuwakot
Udayapur

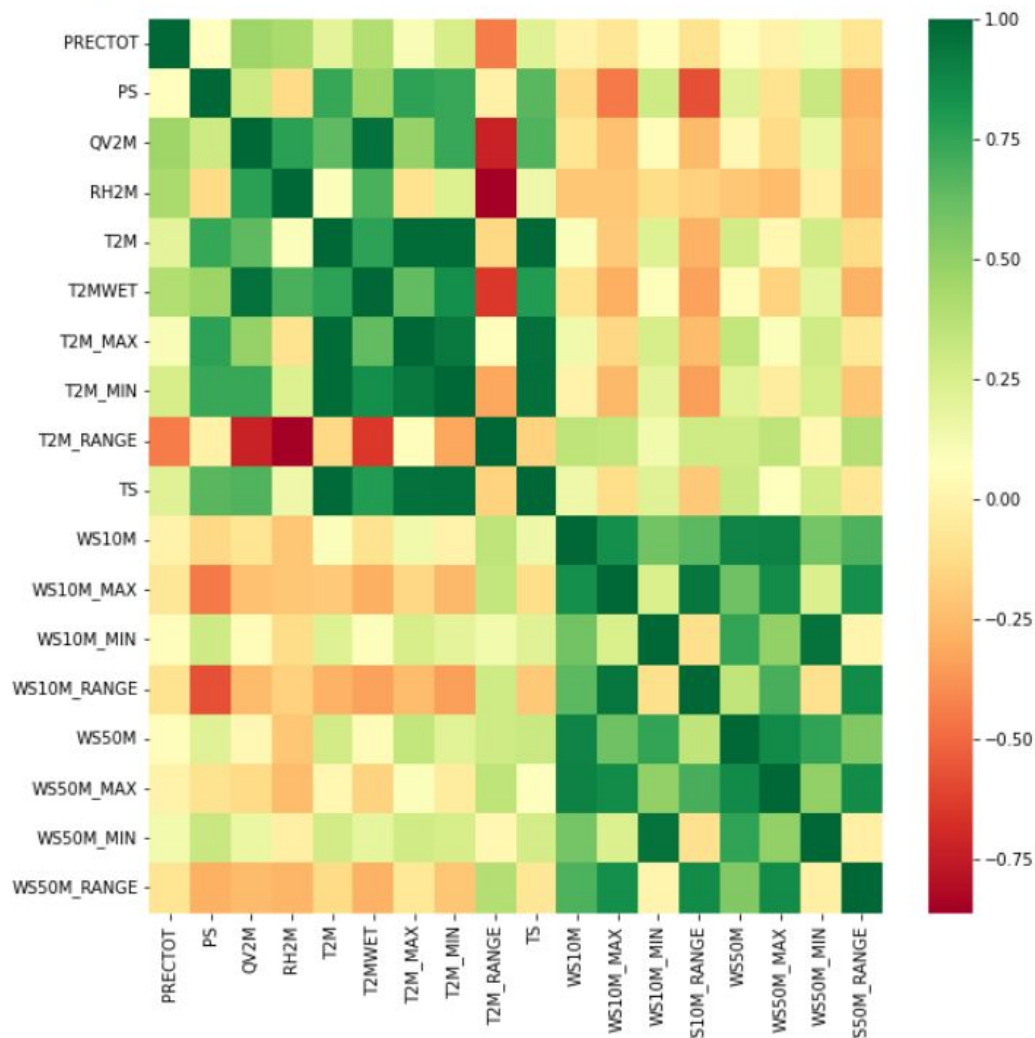
Okhaldhunga
Palpa
Panchther
Parbat
Rasuwa
Routahat
Rukum
Rupandehi
Salyan

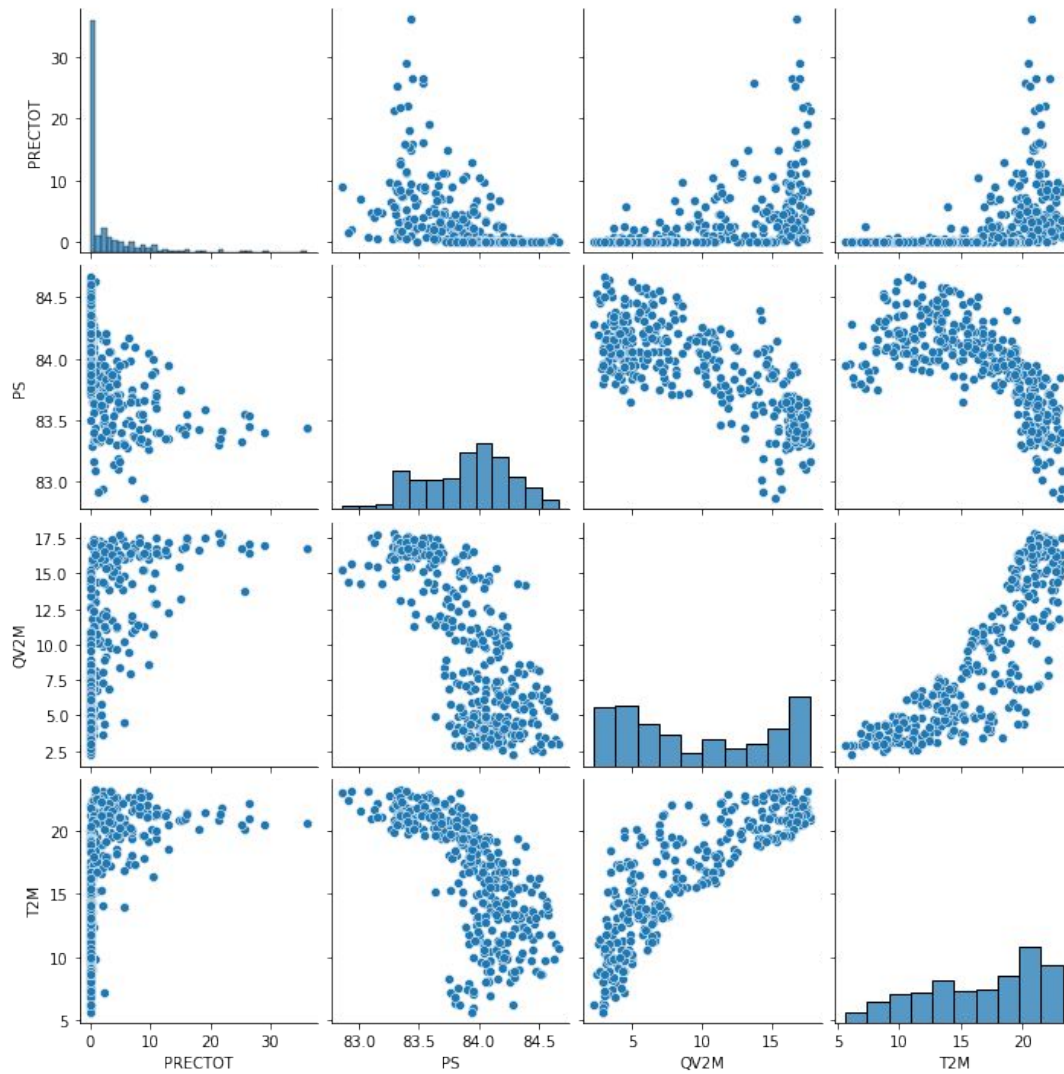


Tool

- Tableau gave a panic!
 - 4 Lacs rows
 - Spatio Temporal
 - Every operations were slow
 - **Quit tableau !** 🦴
-  Python on resque
 - Matplotlib, Seaborn, Pandas

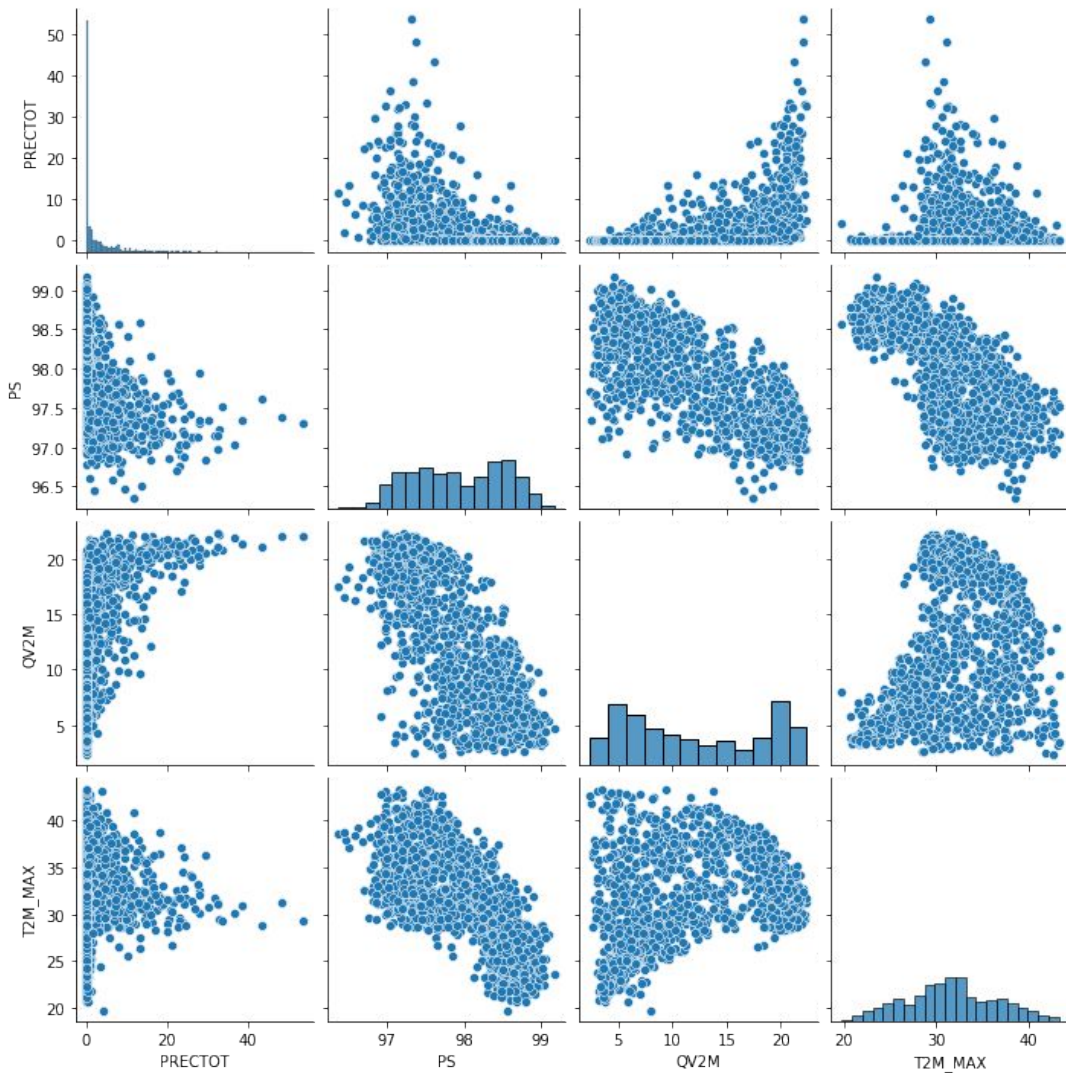
Correlation Between Data



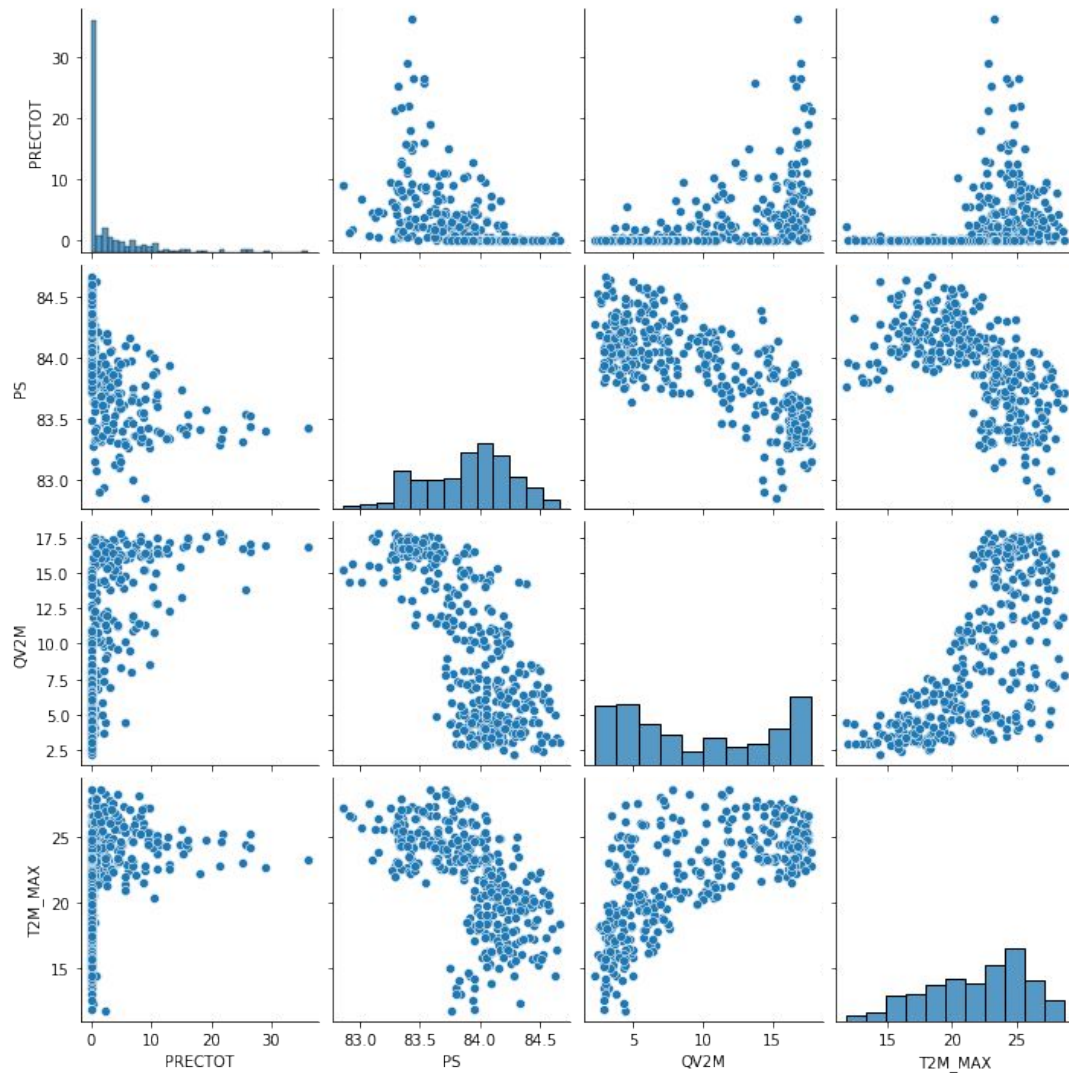


Kathmandu
2019

Dhanusha
Last 5 years

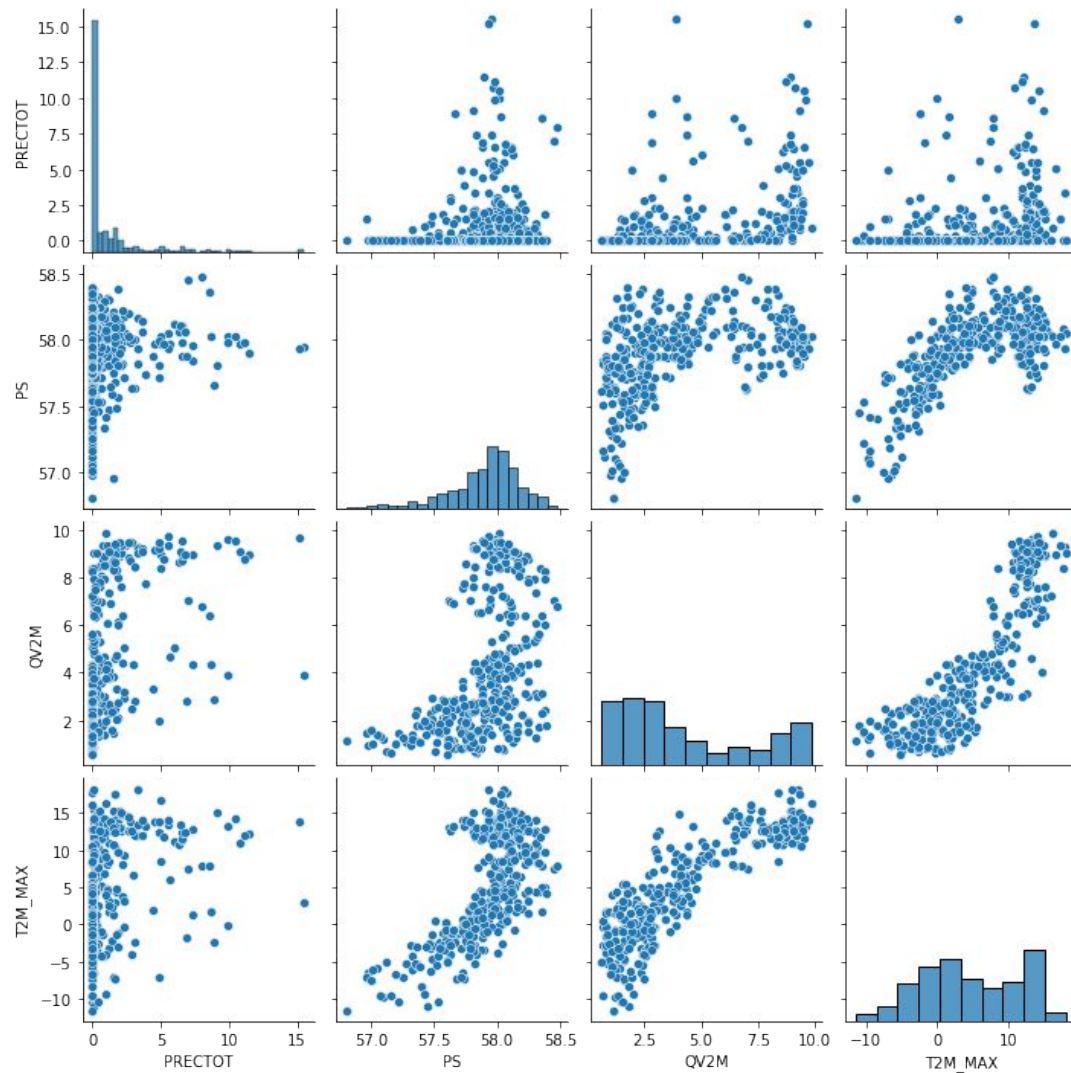


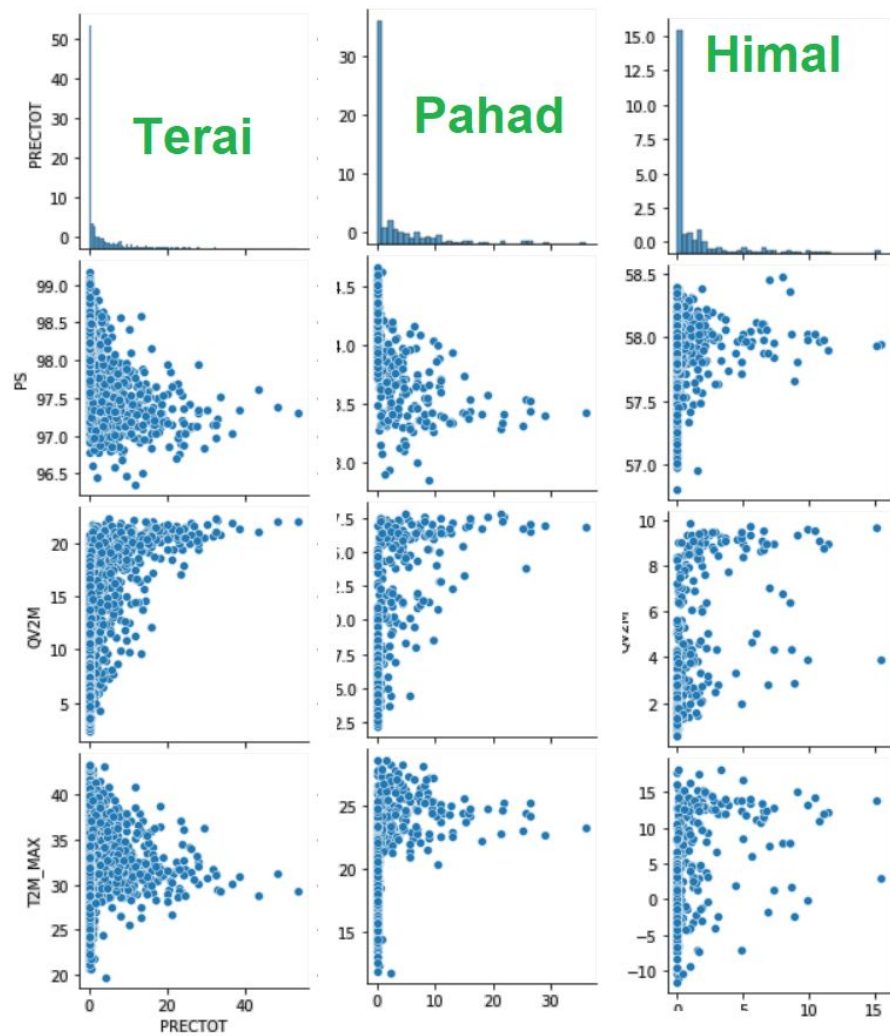
Kathmandu
Last 5 years



Humla

Last 5 years

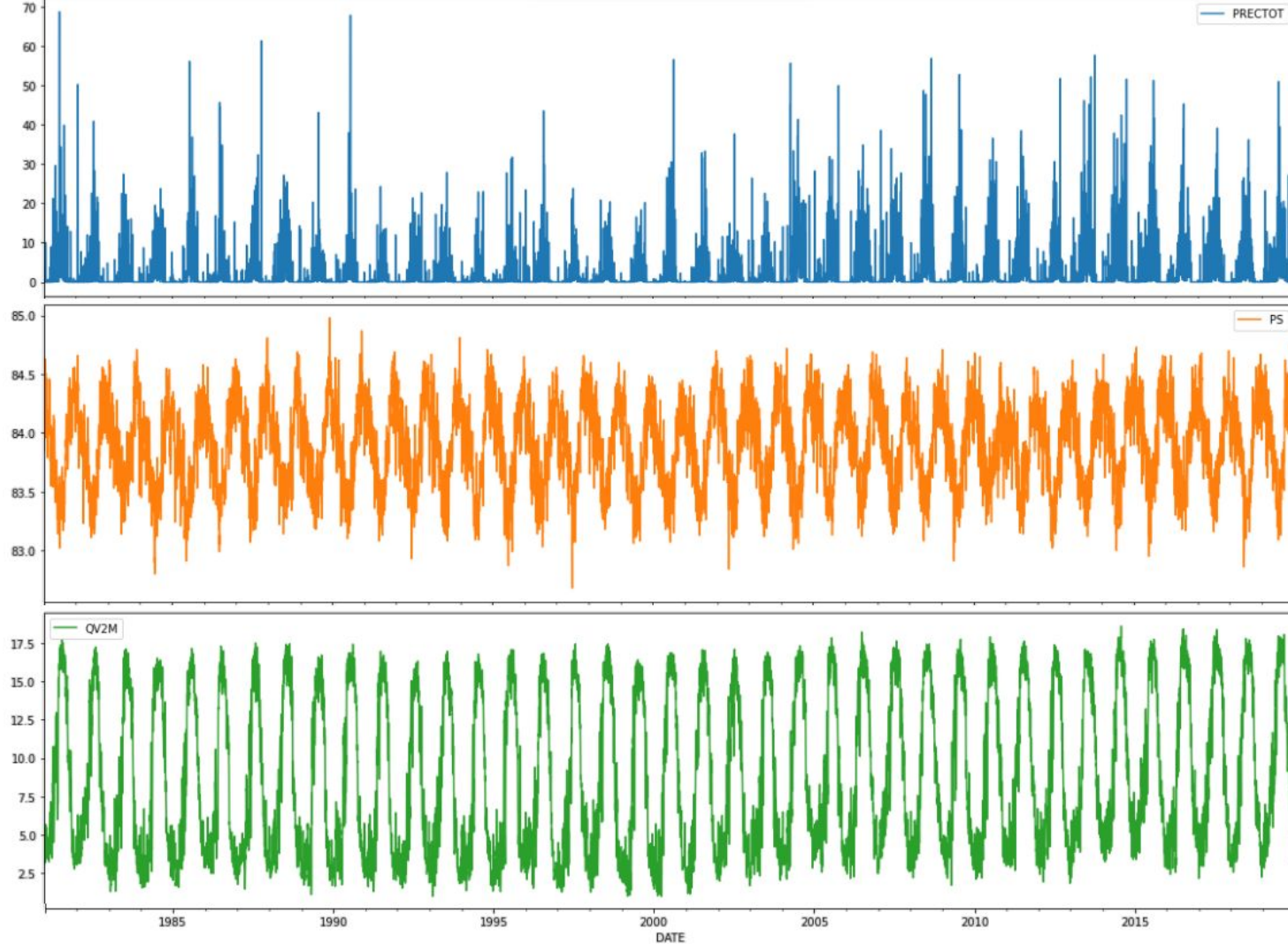




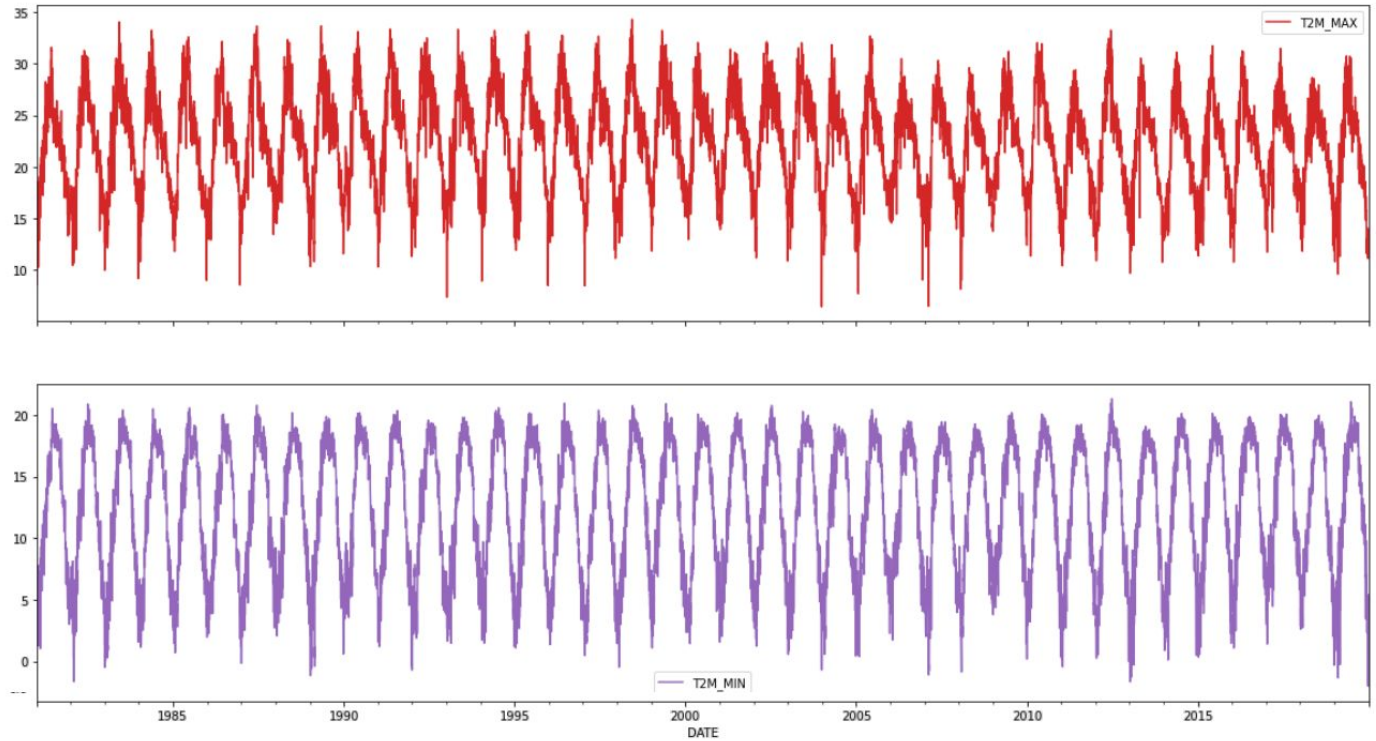
Overview

Kathmandu
District

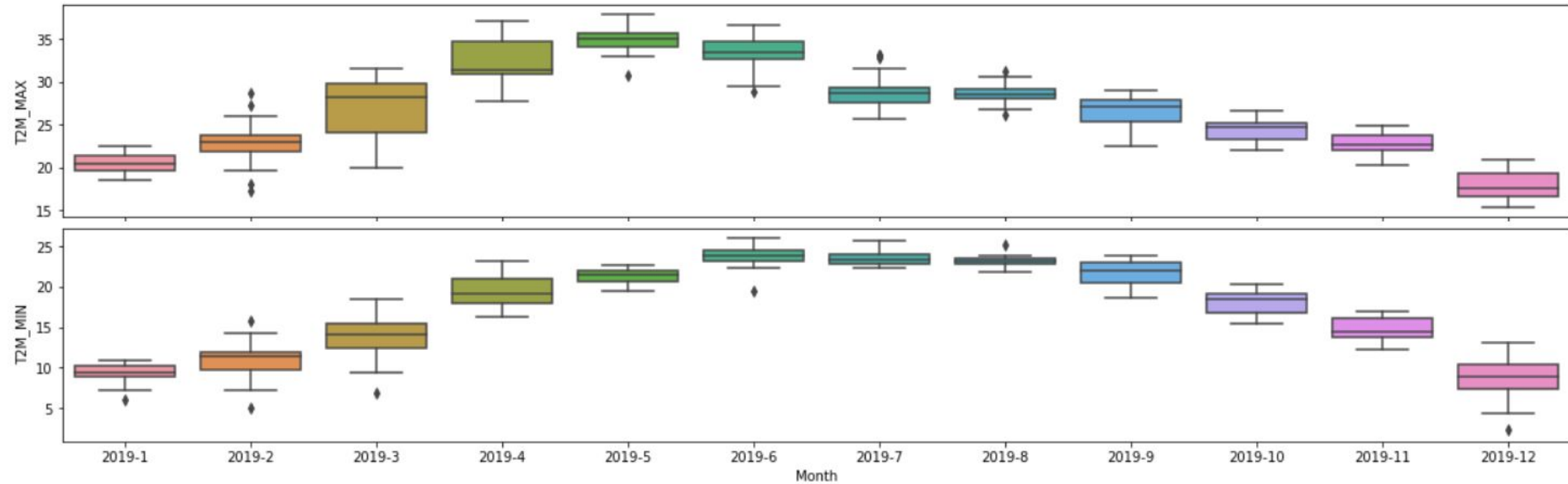
1. Rain
2. Pressure
3. Humidity

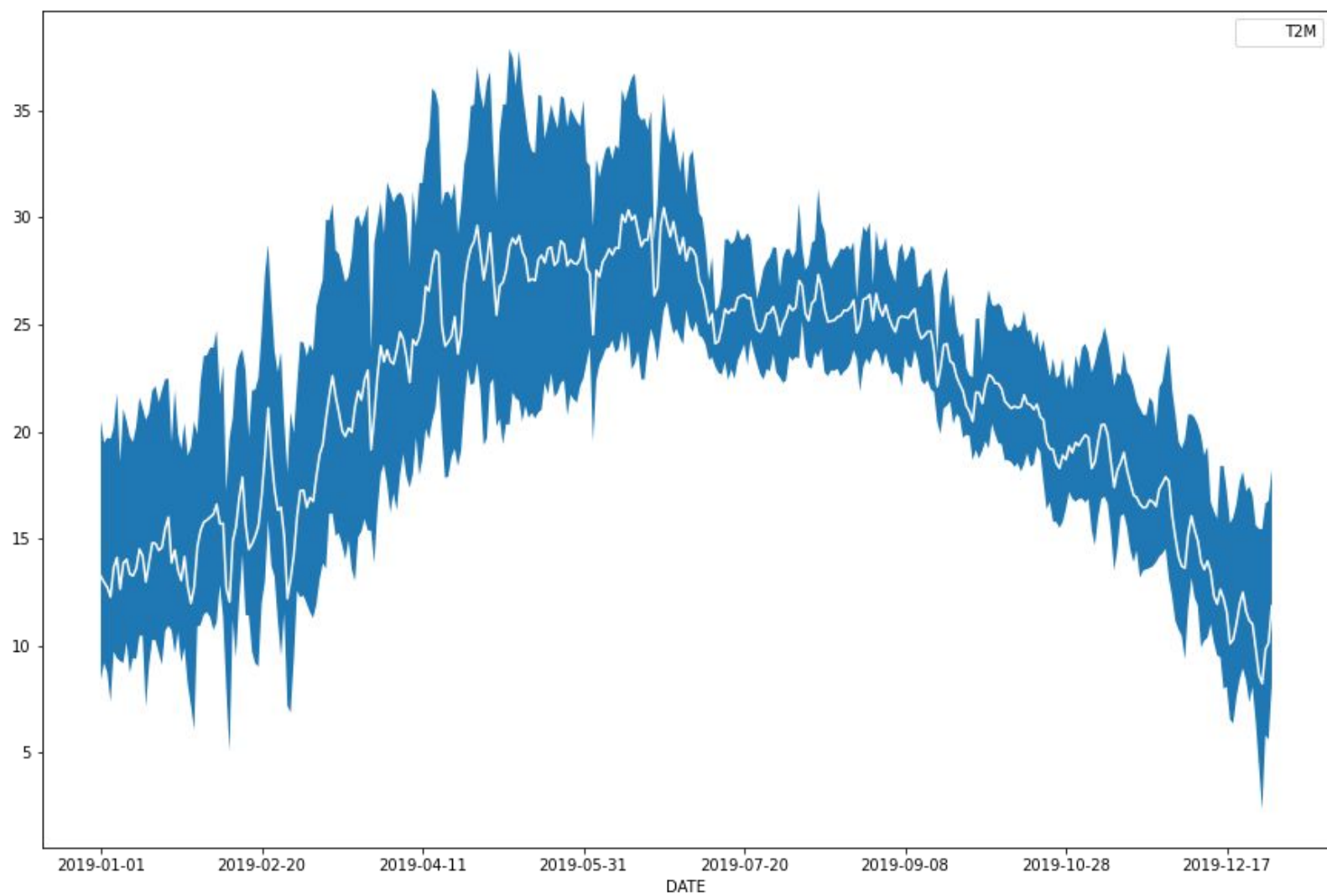


Max/Min Temperature

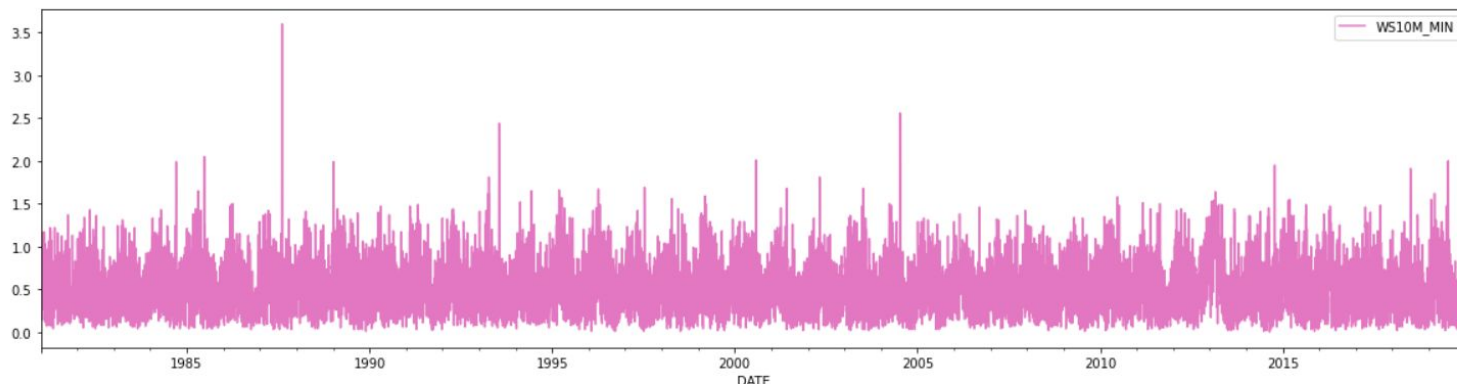
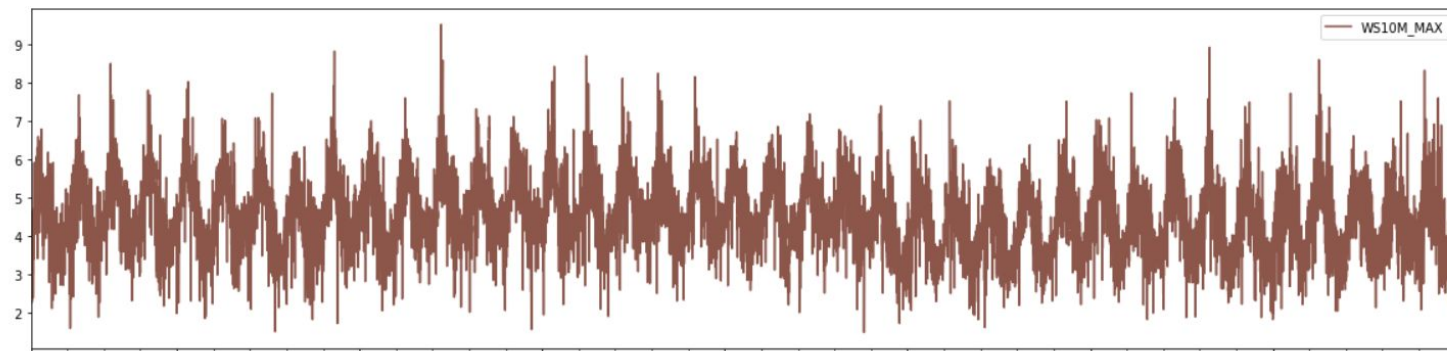


Temperature Variation by Month: KTM

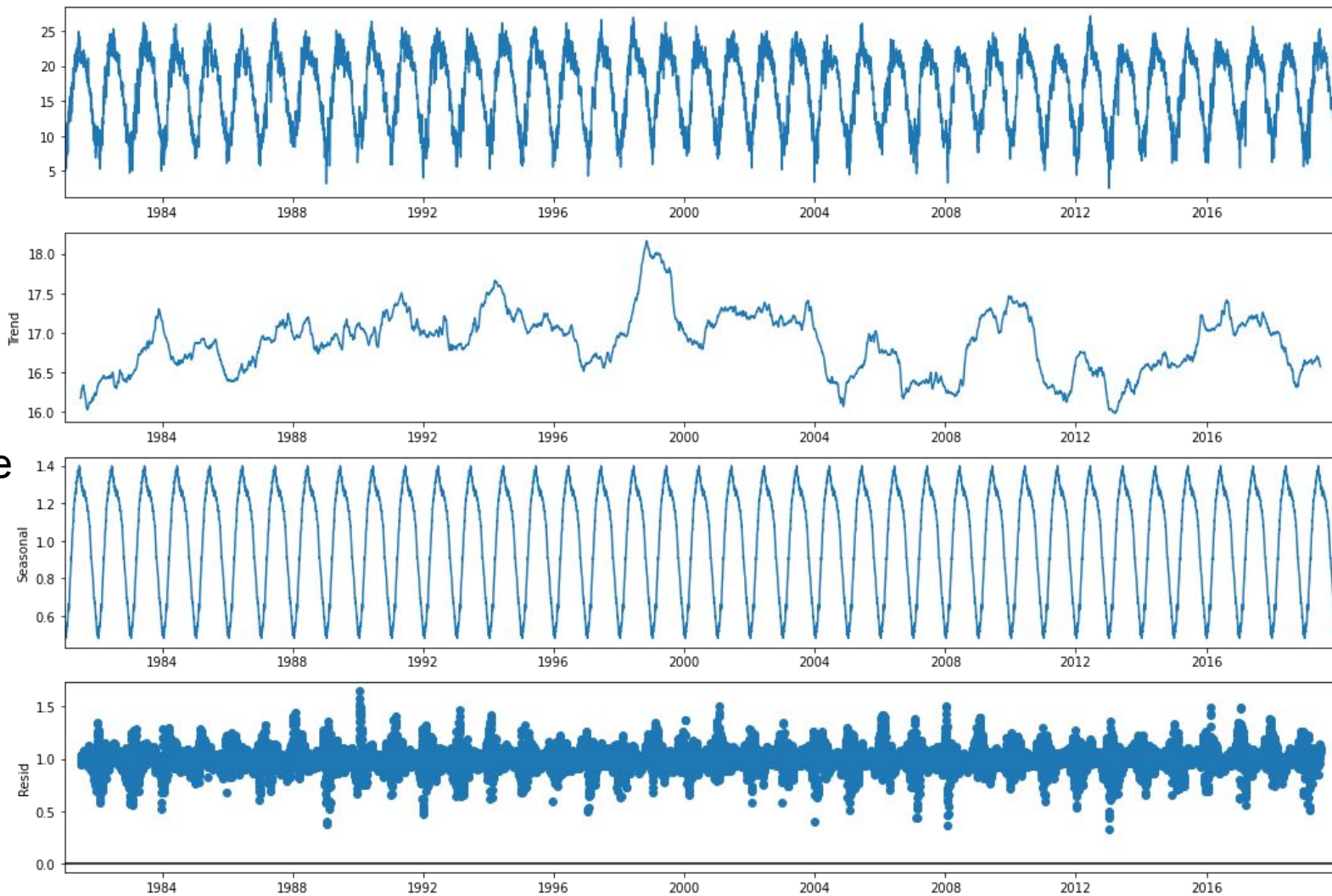


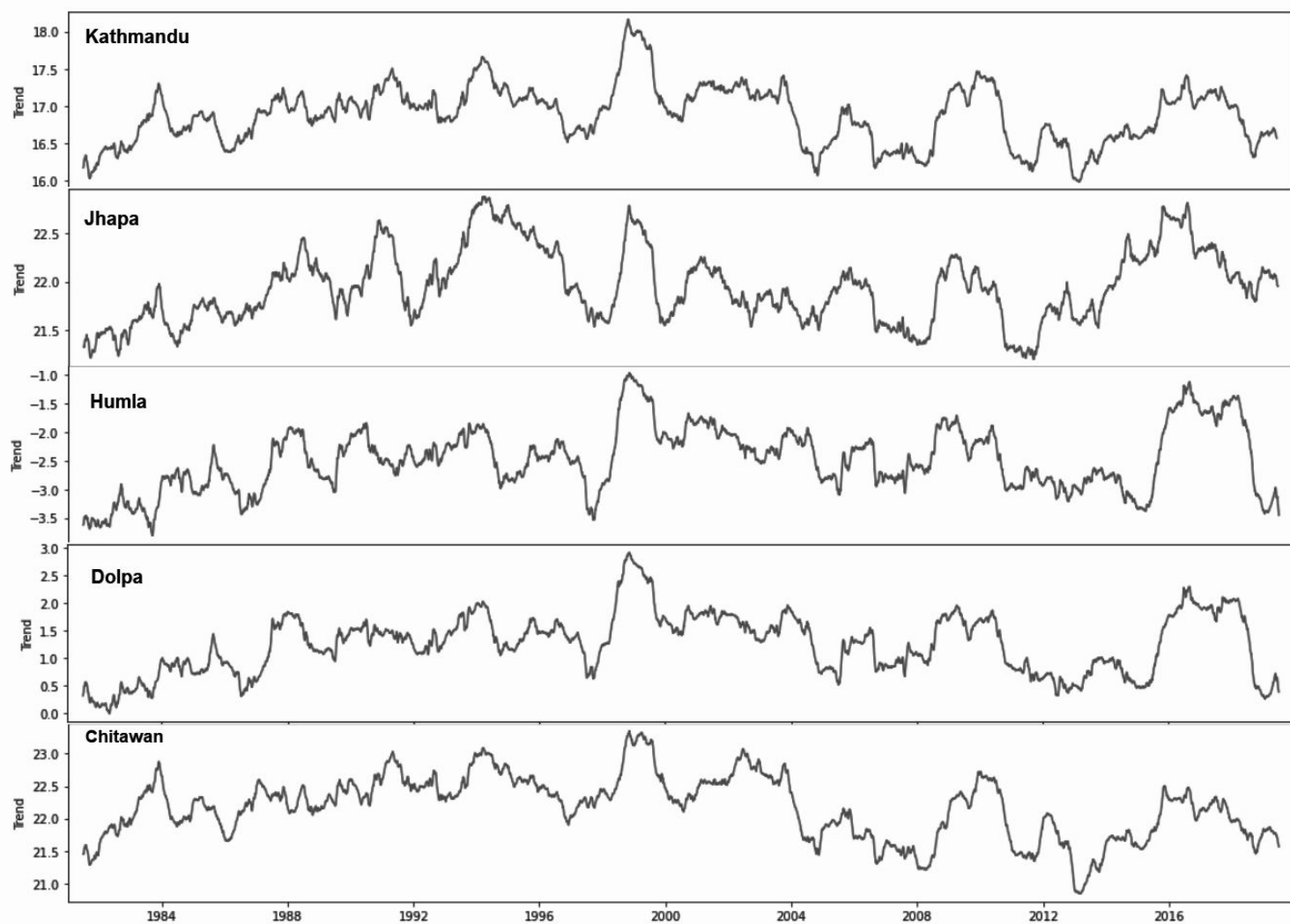


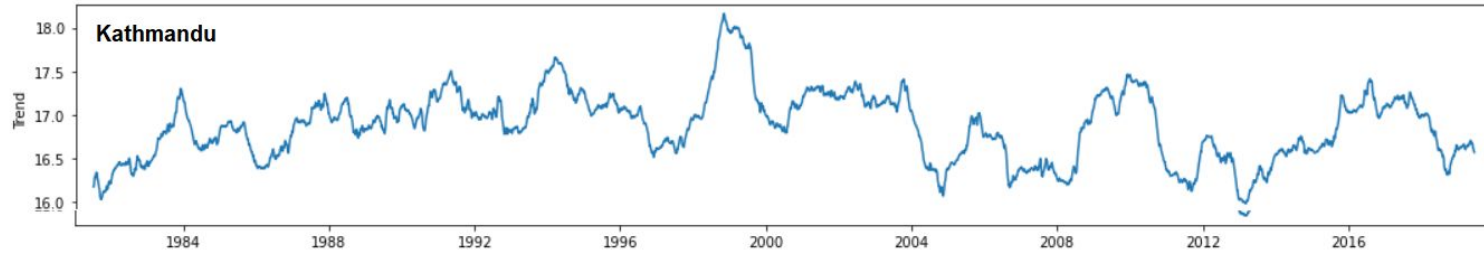
Max/Min Wind Speed



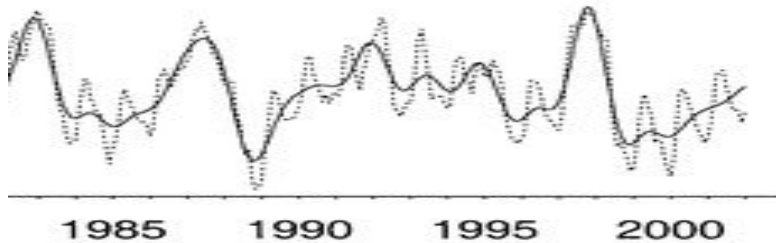
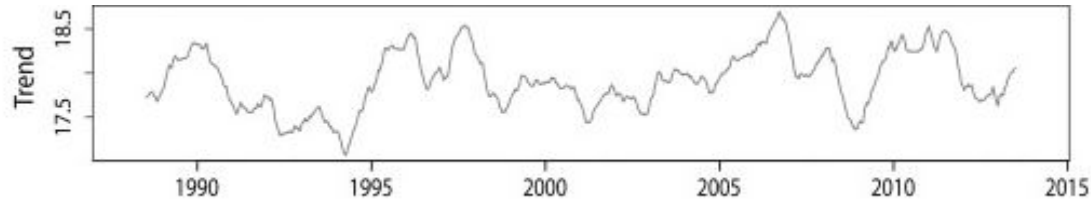
Is
Nepal's
temperature
really
rising?





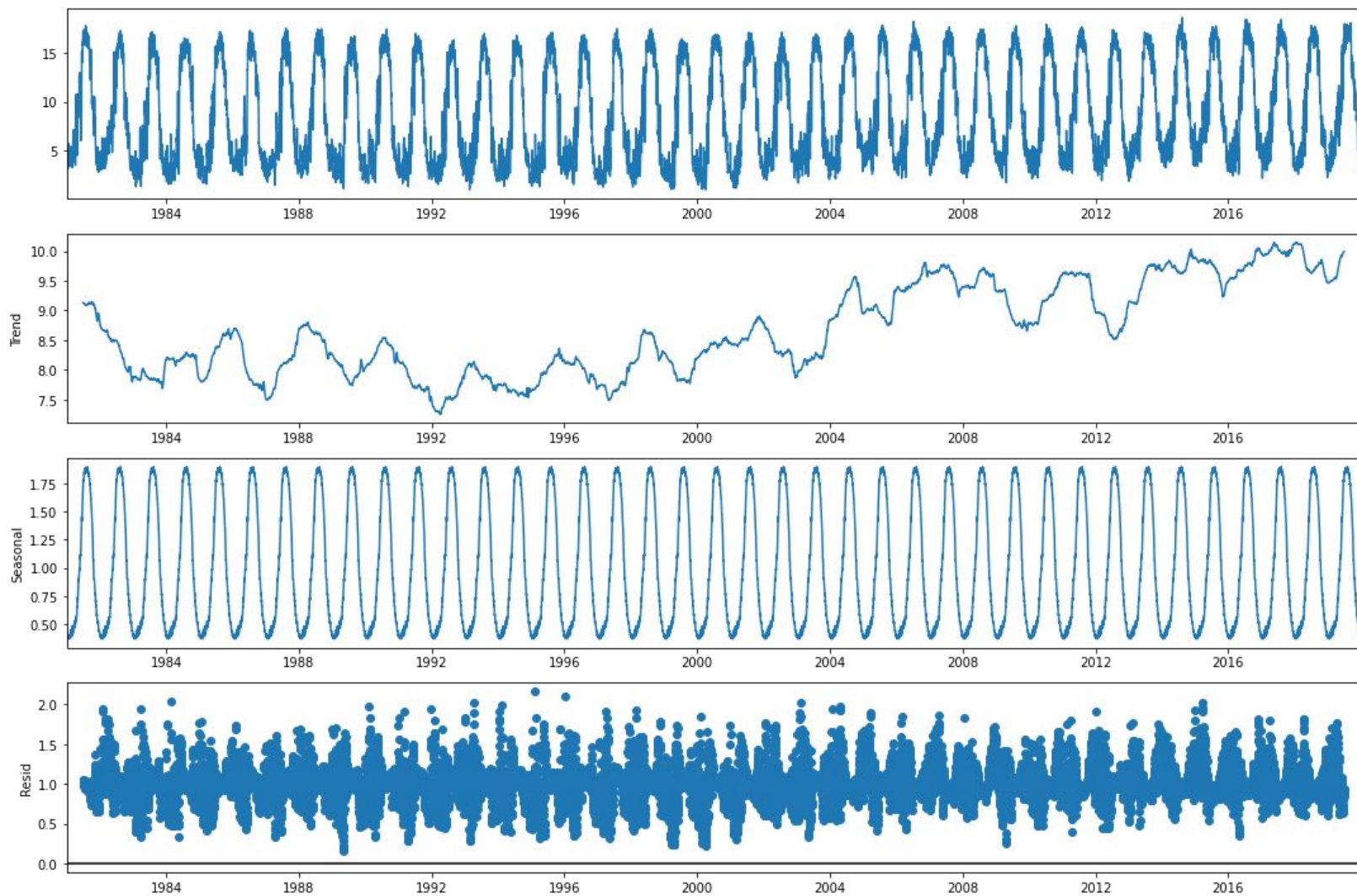


Time series analysis of data for sea surface temperature and upwelling components from the southwest coast of Portugal (Priscila CostaGoela et. al.)

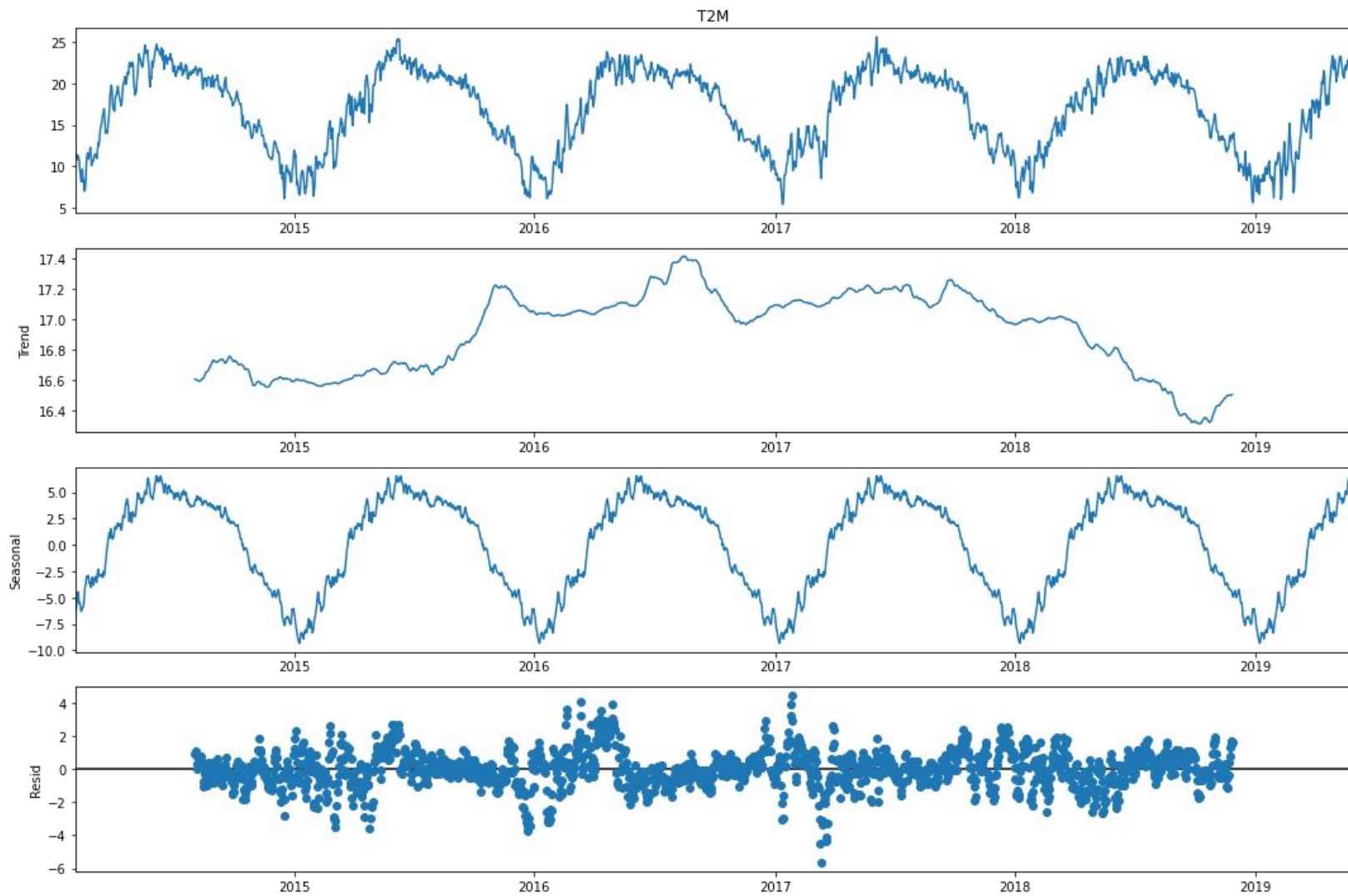


The Variability of Seasonality (Pezzulli et.al.)
Equitorial Pacific Sea Surface Temperatures

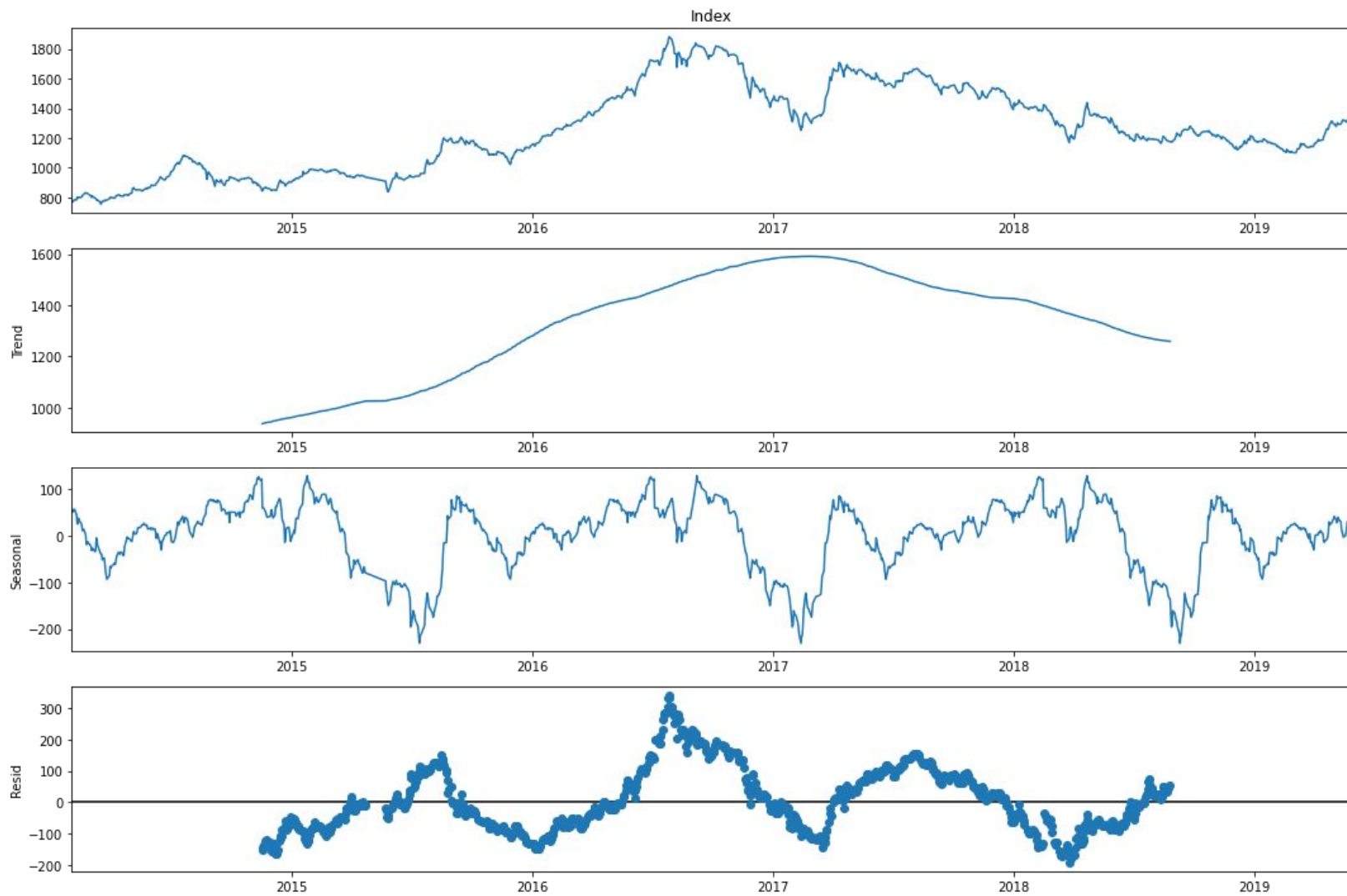
But
humidity
is.



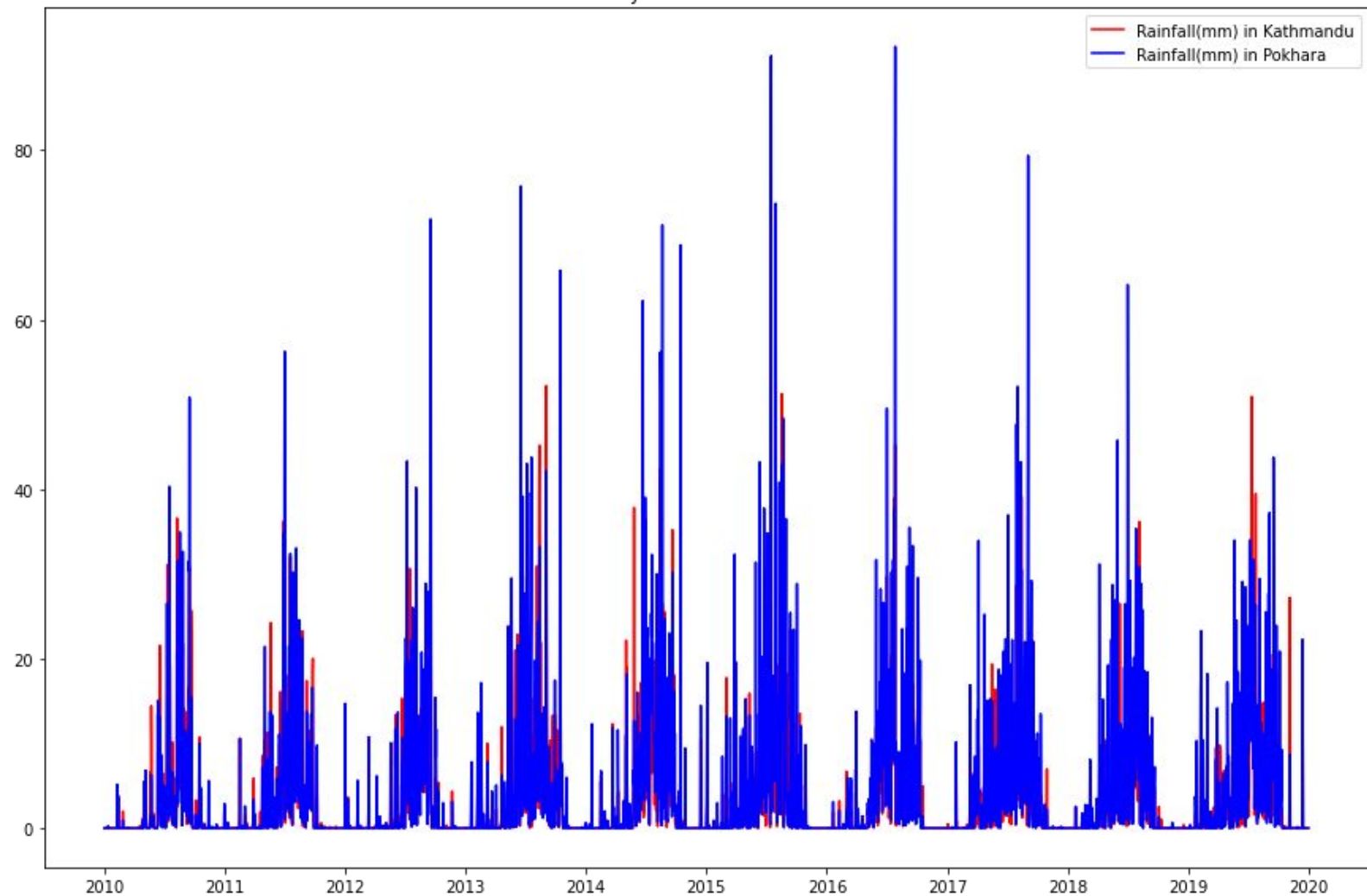
Past few
years



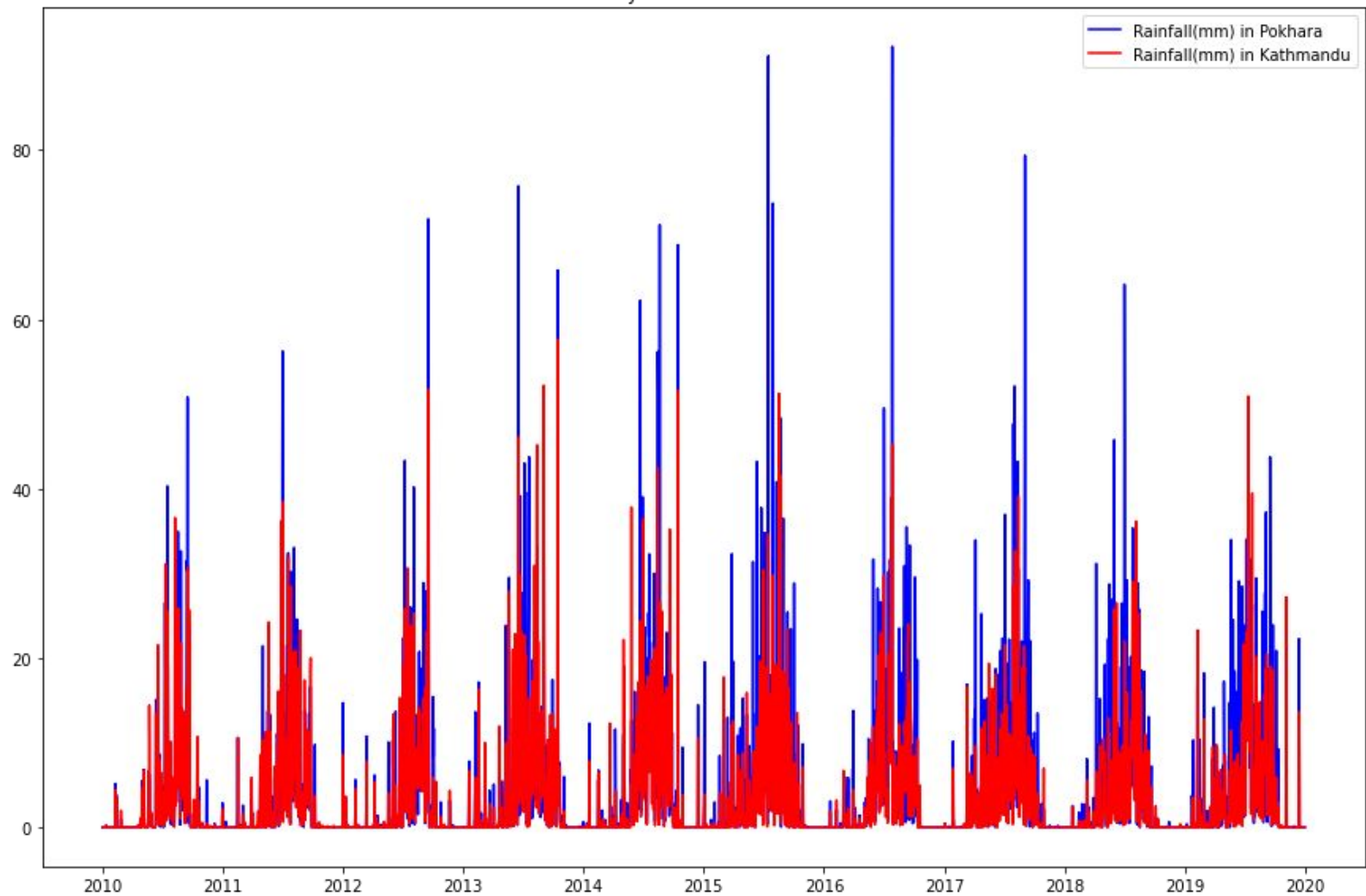
NEPSE



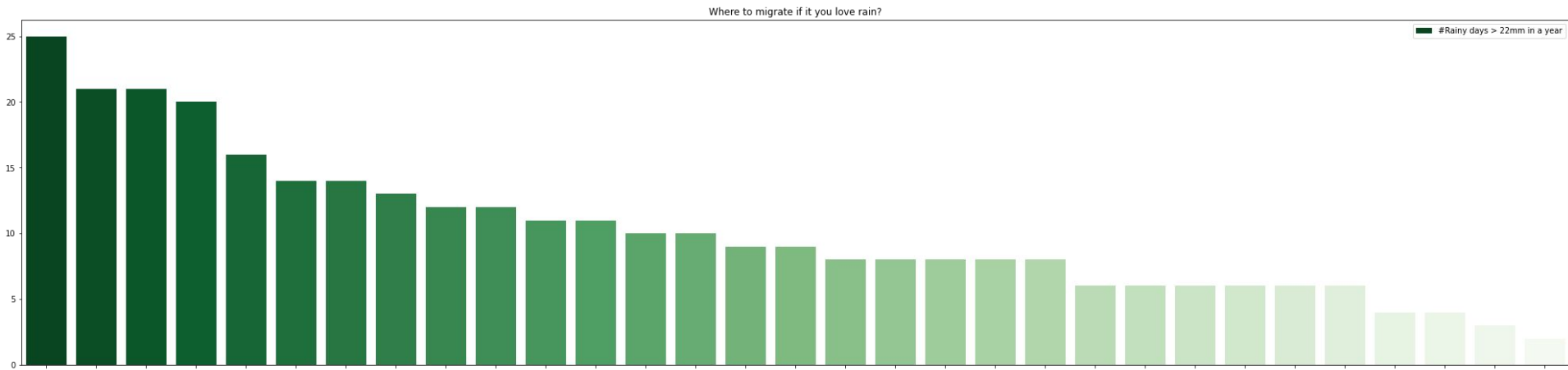
Is it reasonable to carry an umbrella in KTM if it rains in PKR?



Is it reasonable to carry an umbrella in PKR if it rains in KTM?

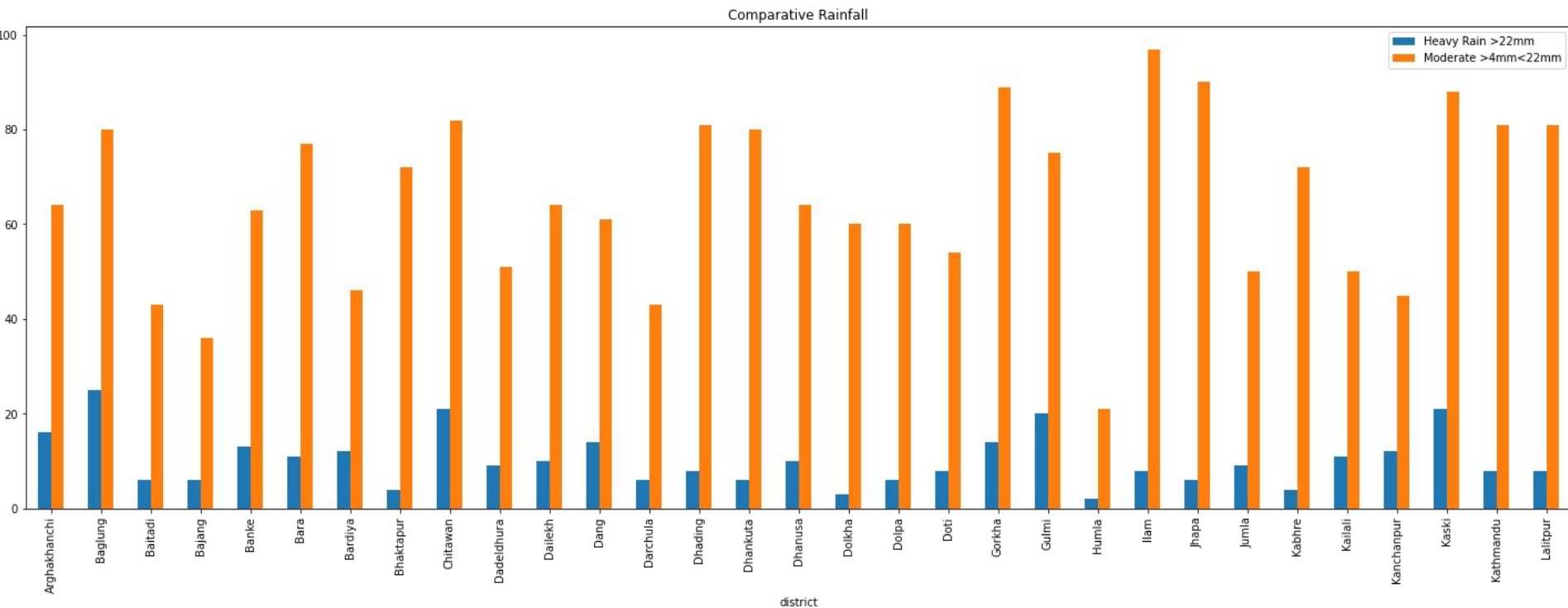


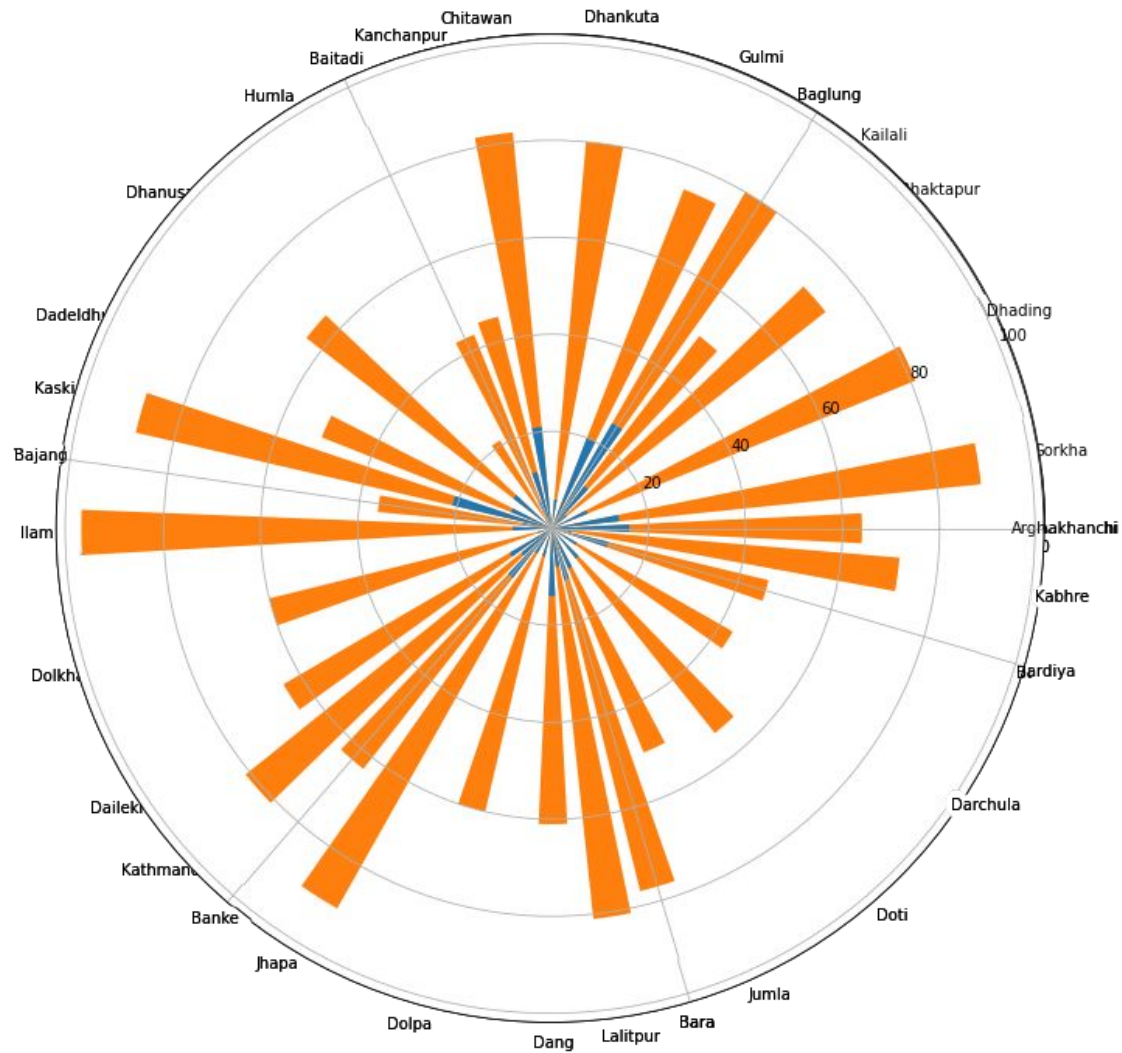
Where to migrate if it you love rain?



2015-01-01 : 2016-01-01

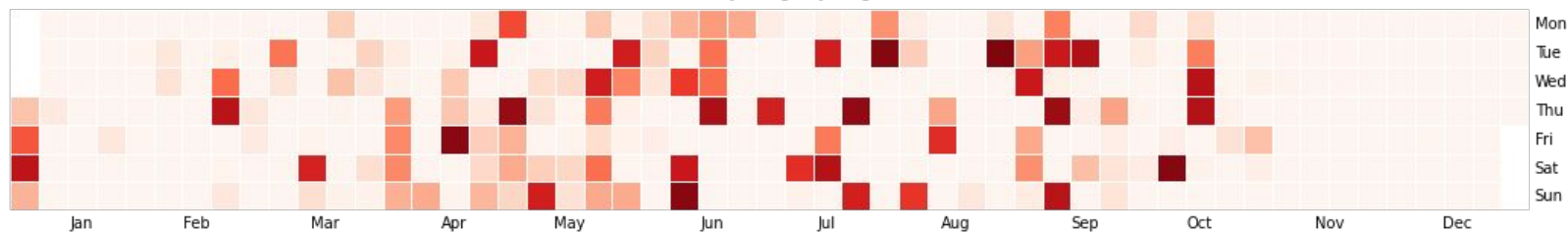
Heavy vs Moderate Rain



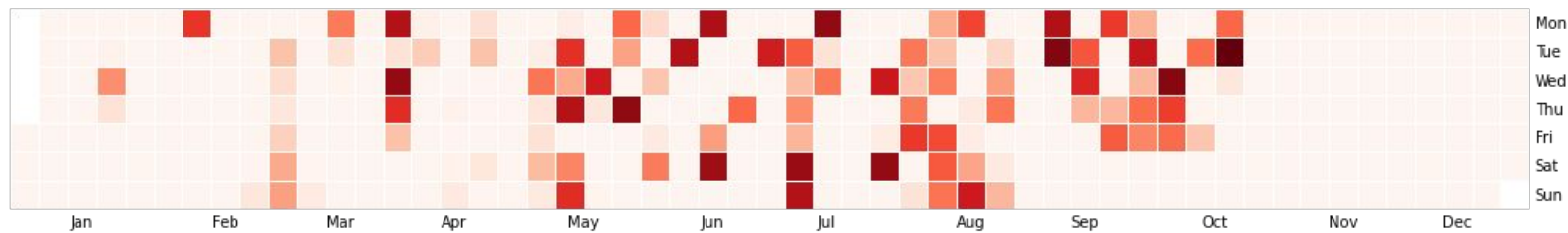


Best Days to go cycling

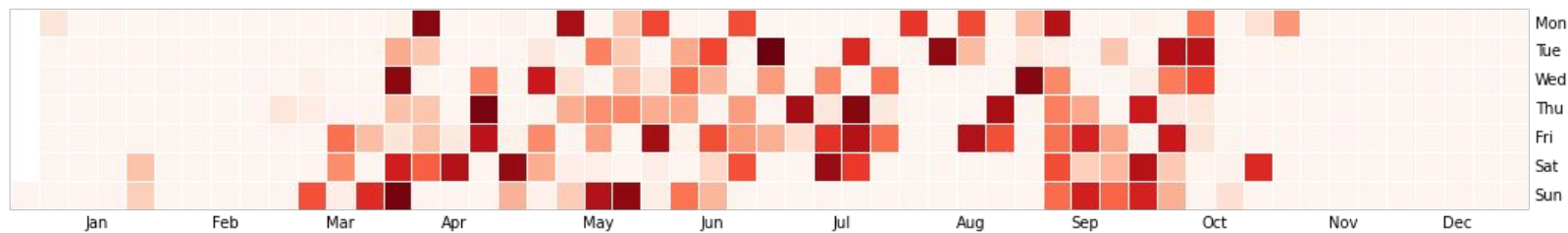
2015



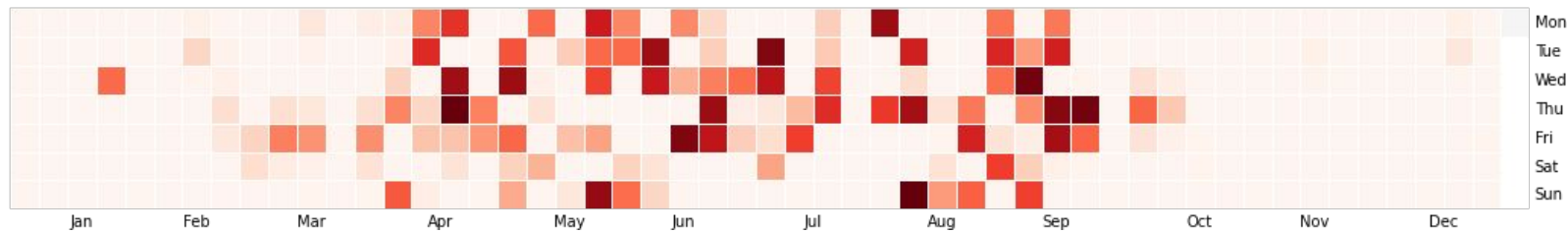
2016

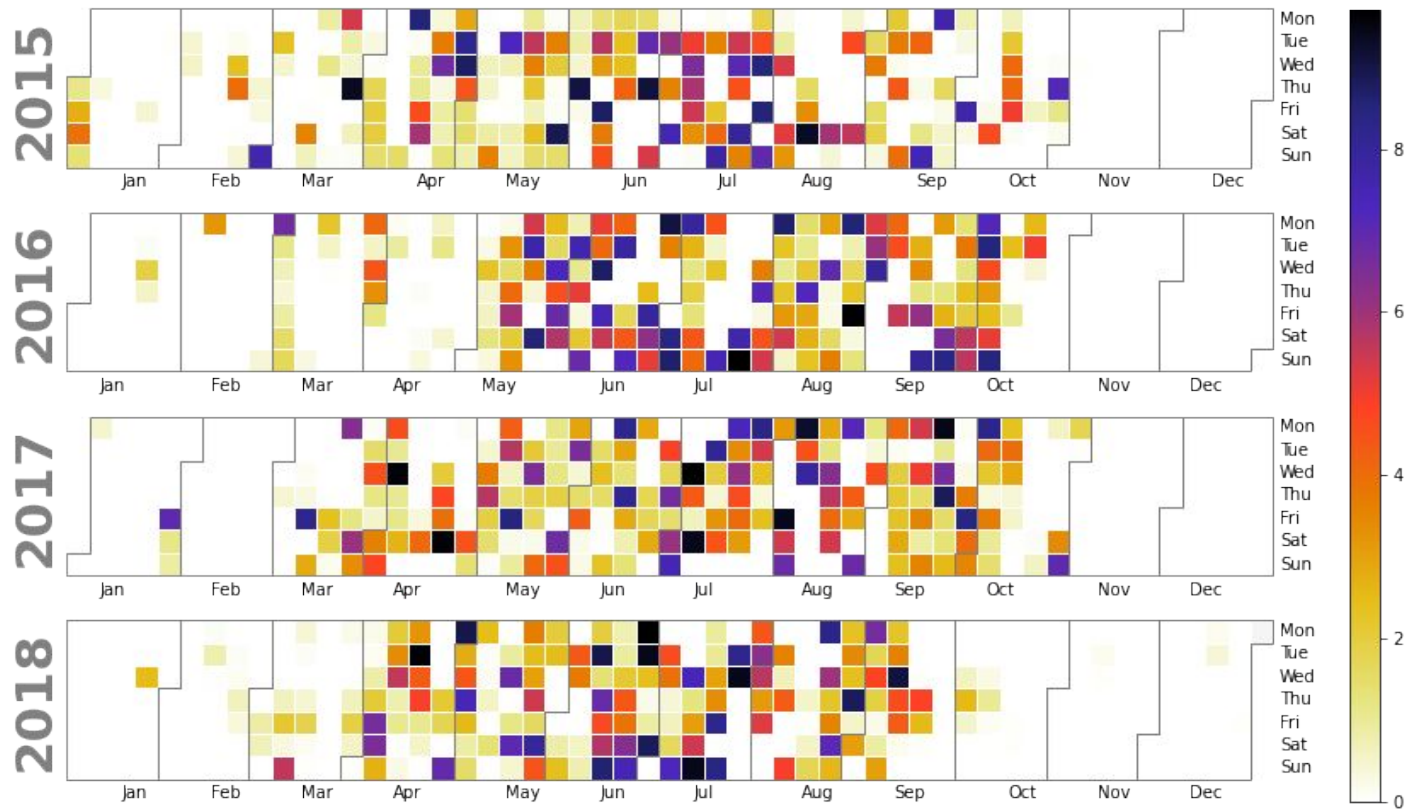


2017



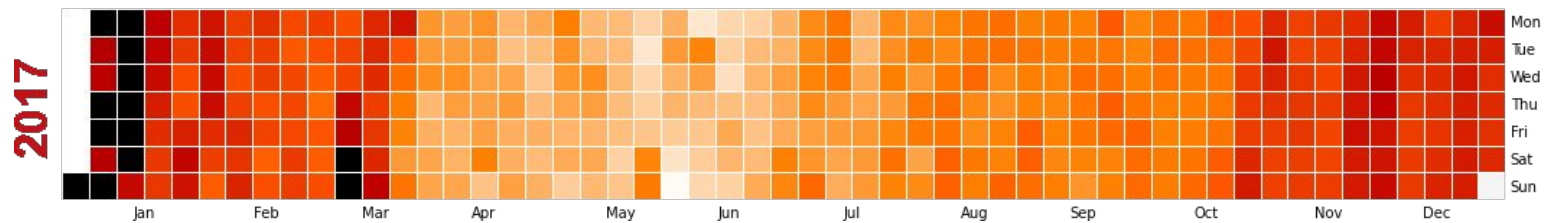
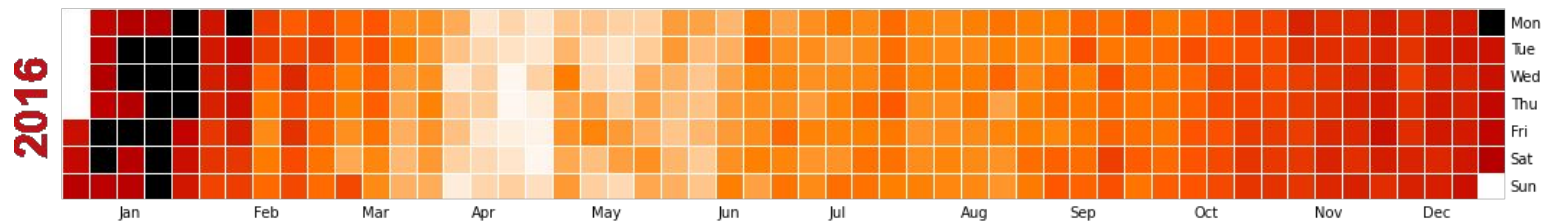
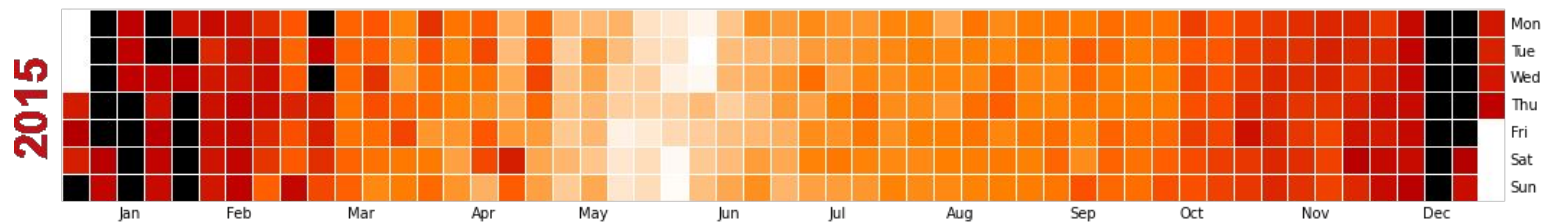
2018

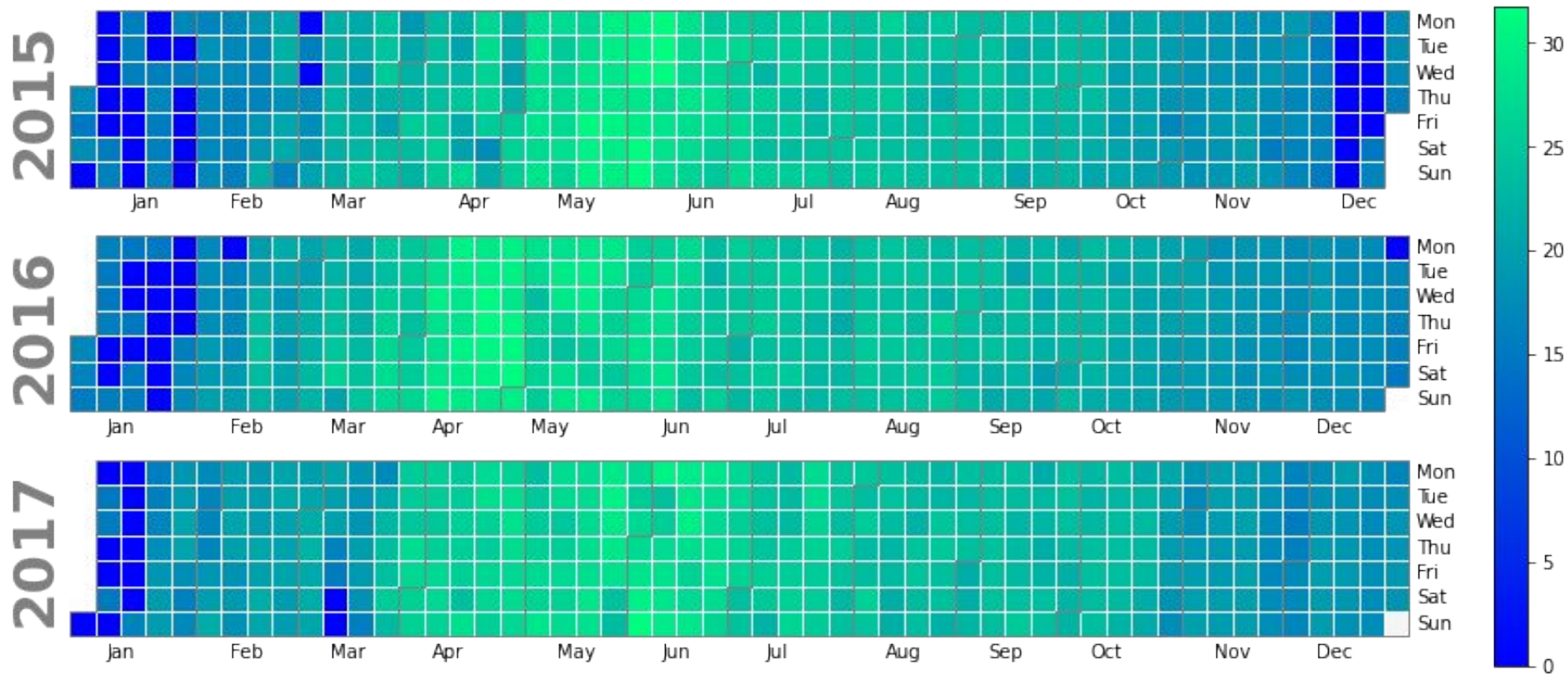




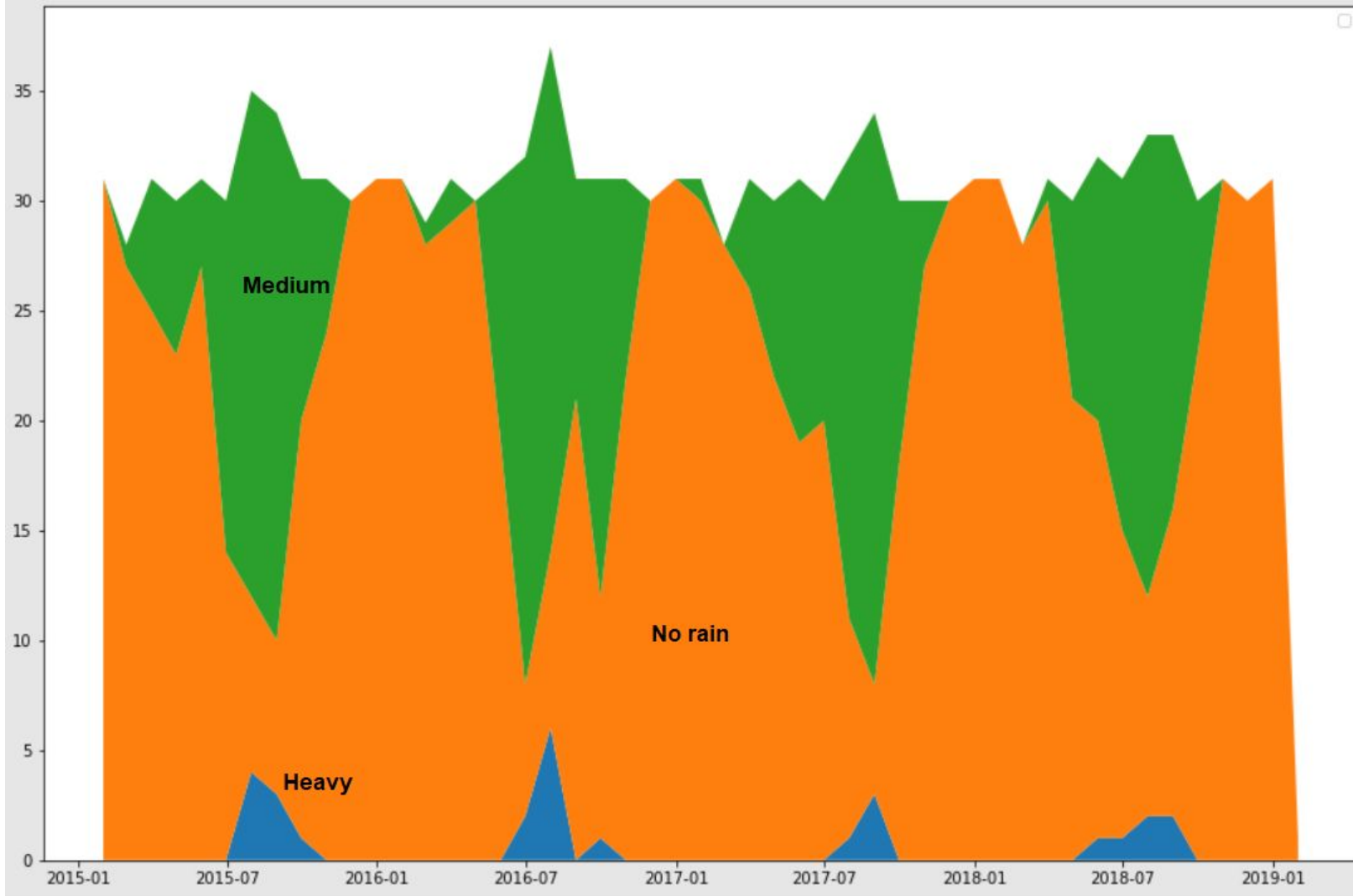
Dark indicates heavy rain. white is good

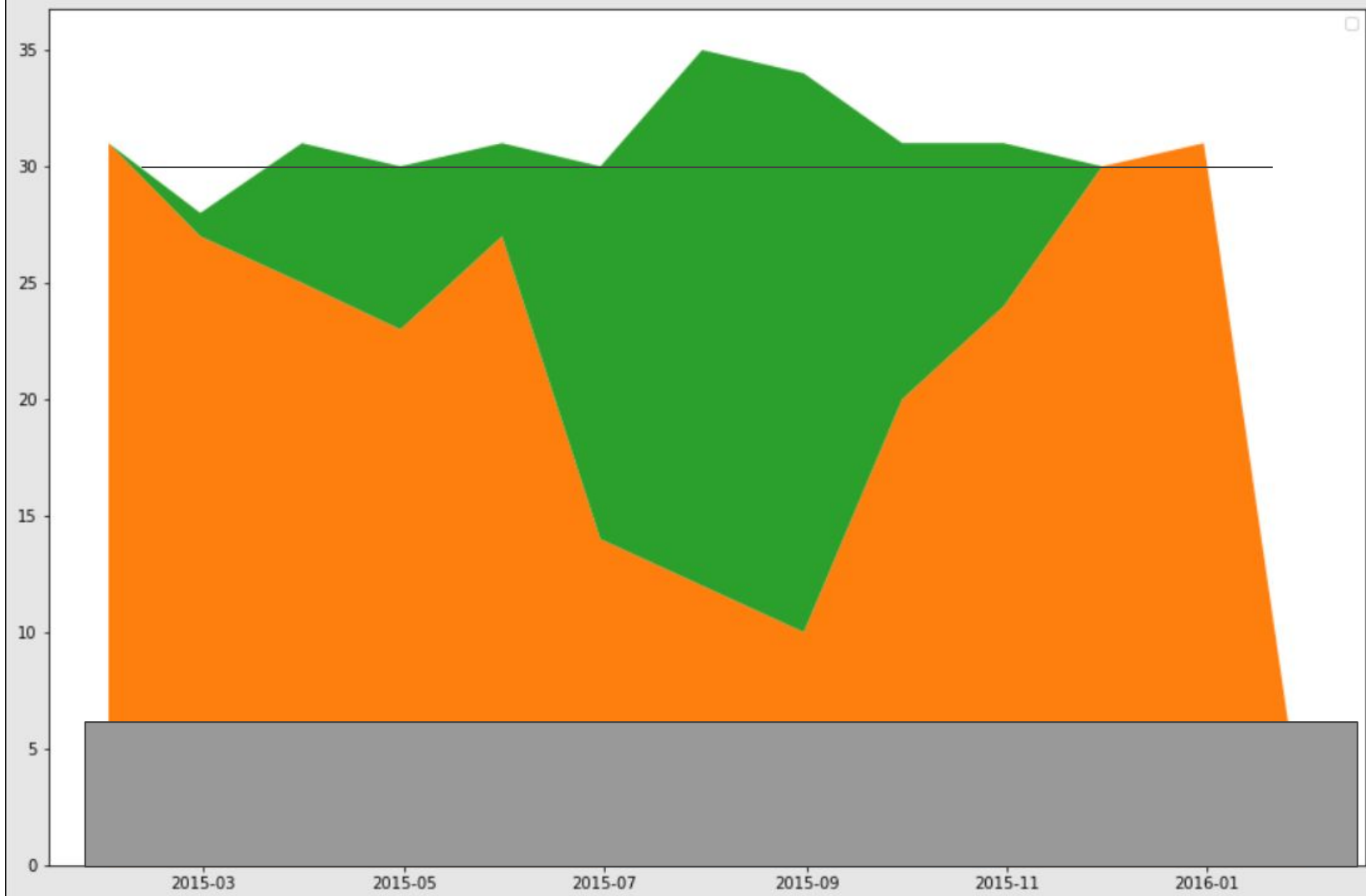
Best Days to buy icecream for your kid



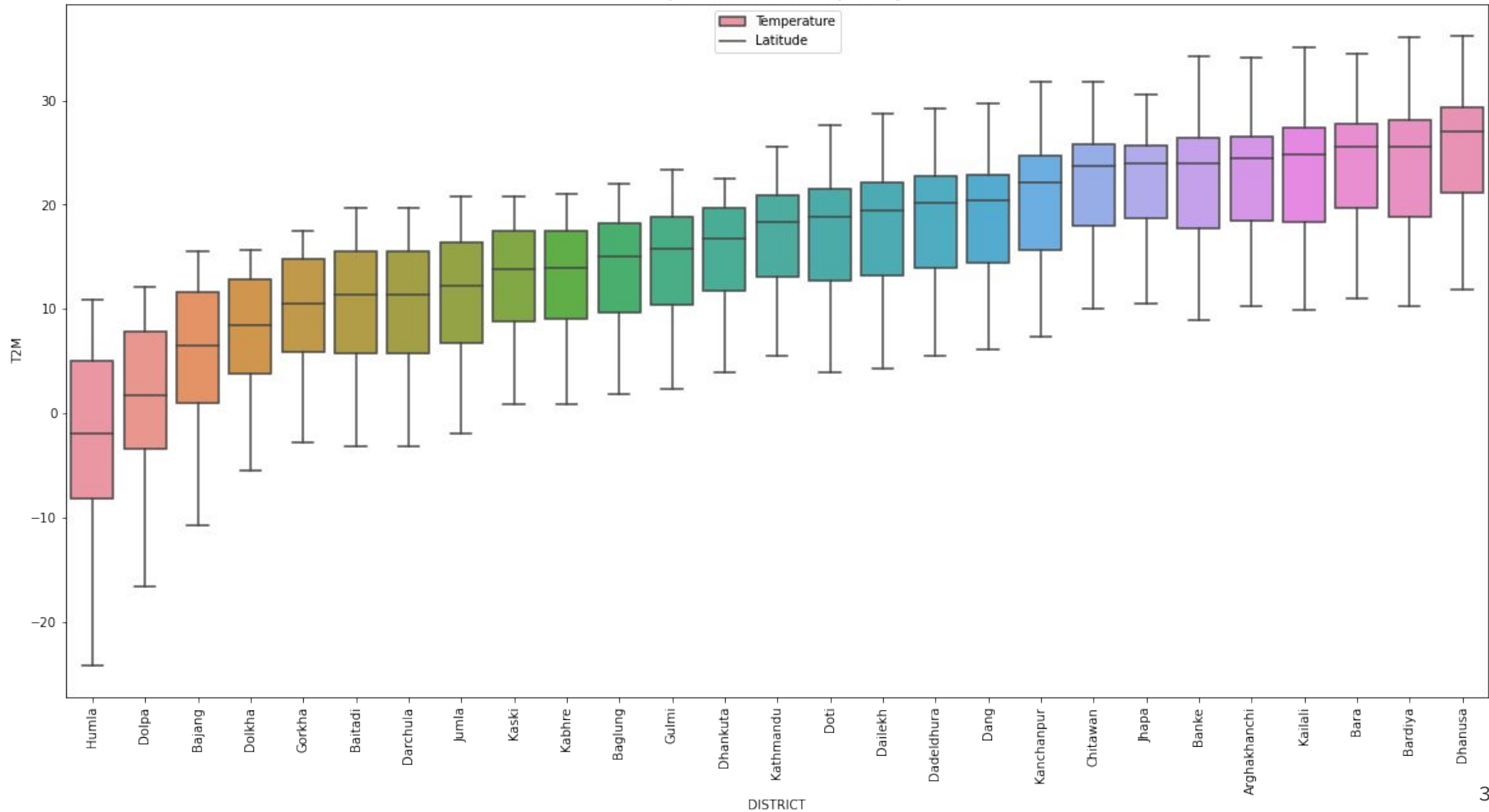


Best days to buy Ice-cream. Green is Good. (winter cmap)

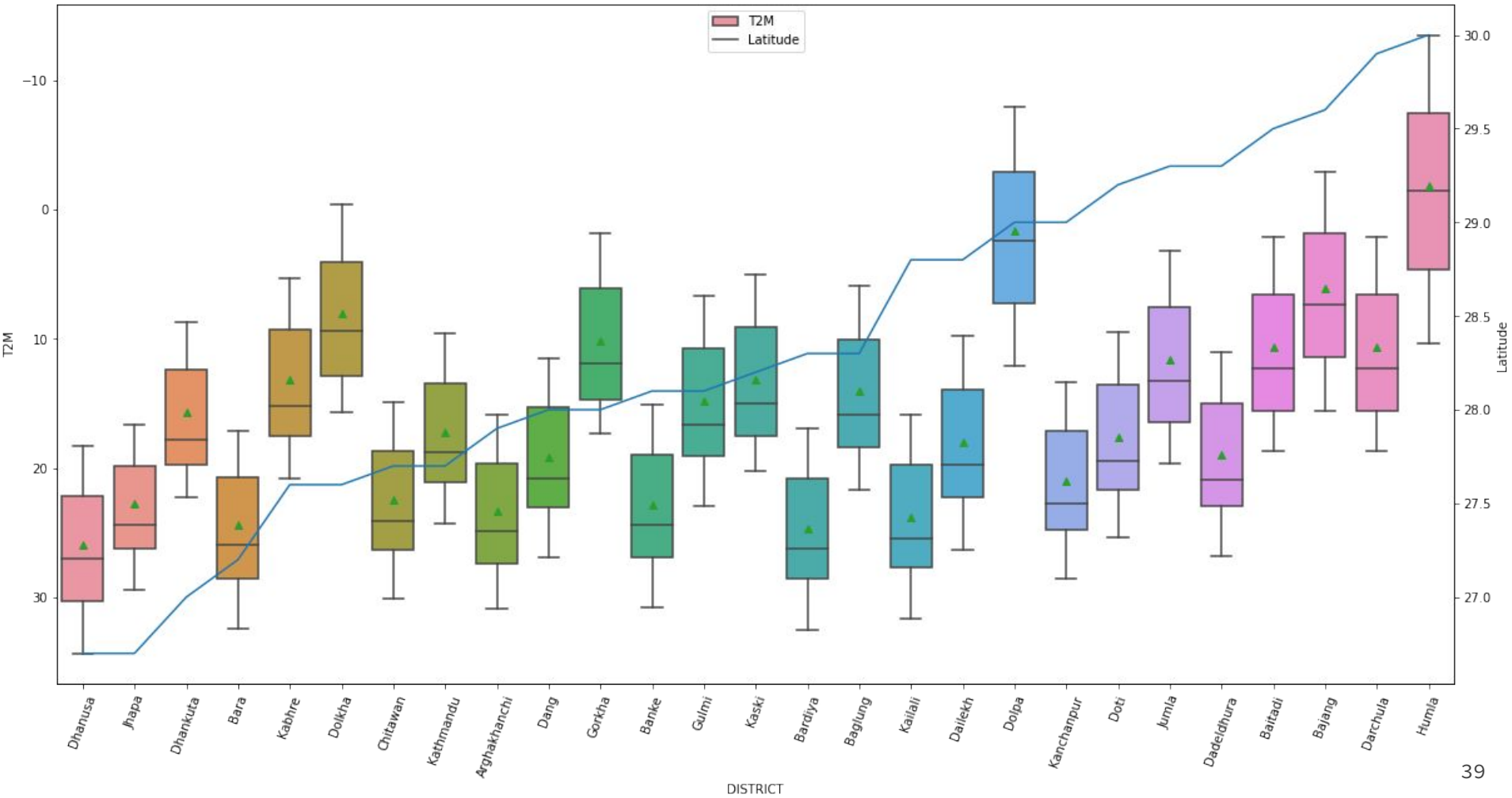




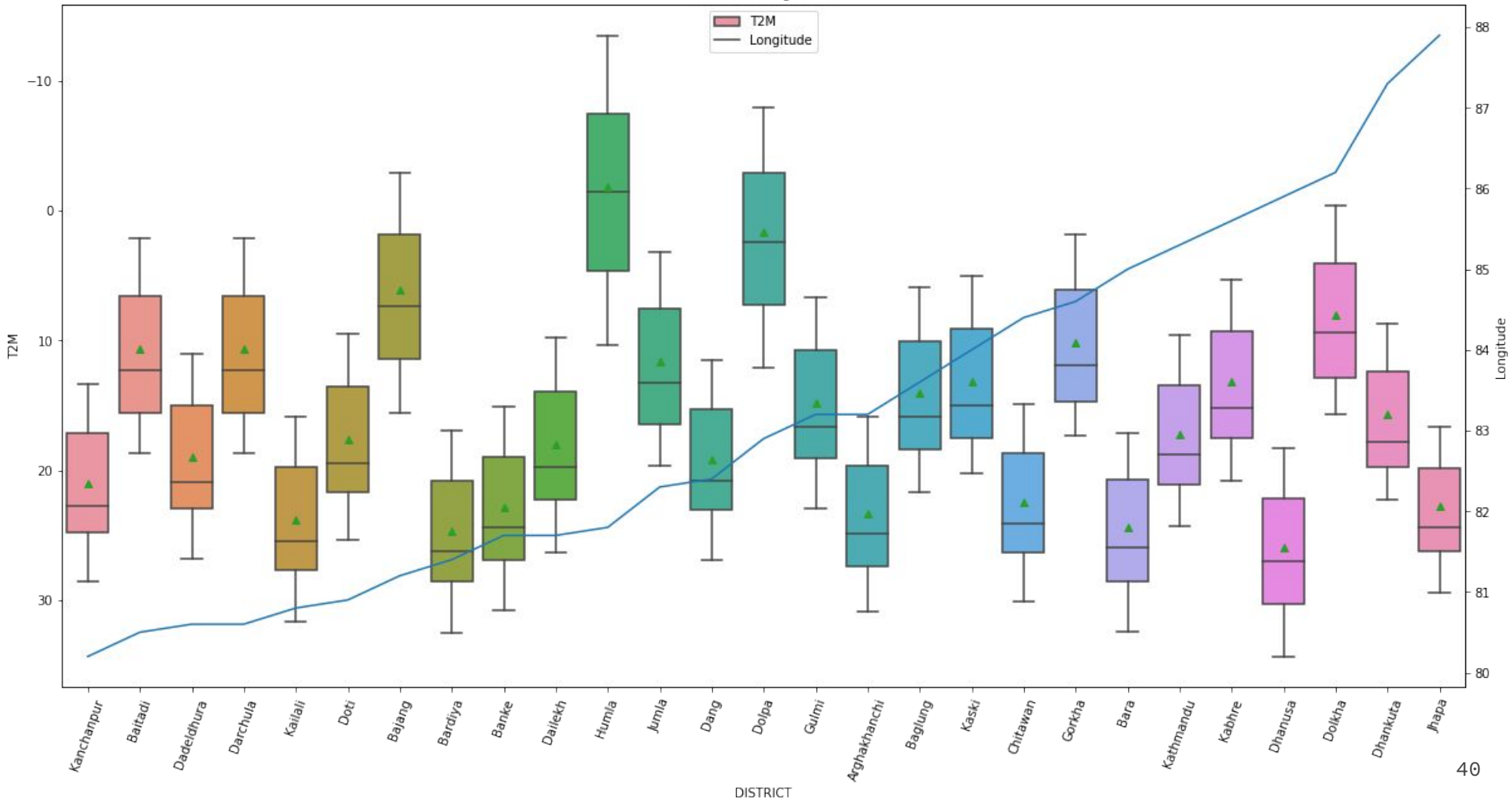
Do you see twin sister of your city?



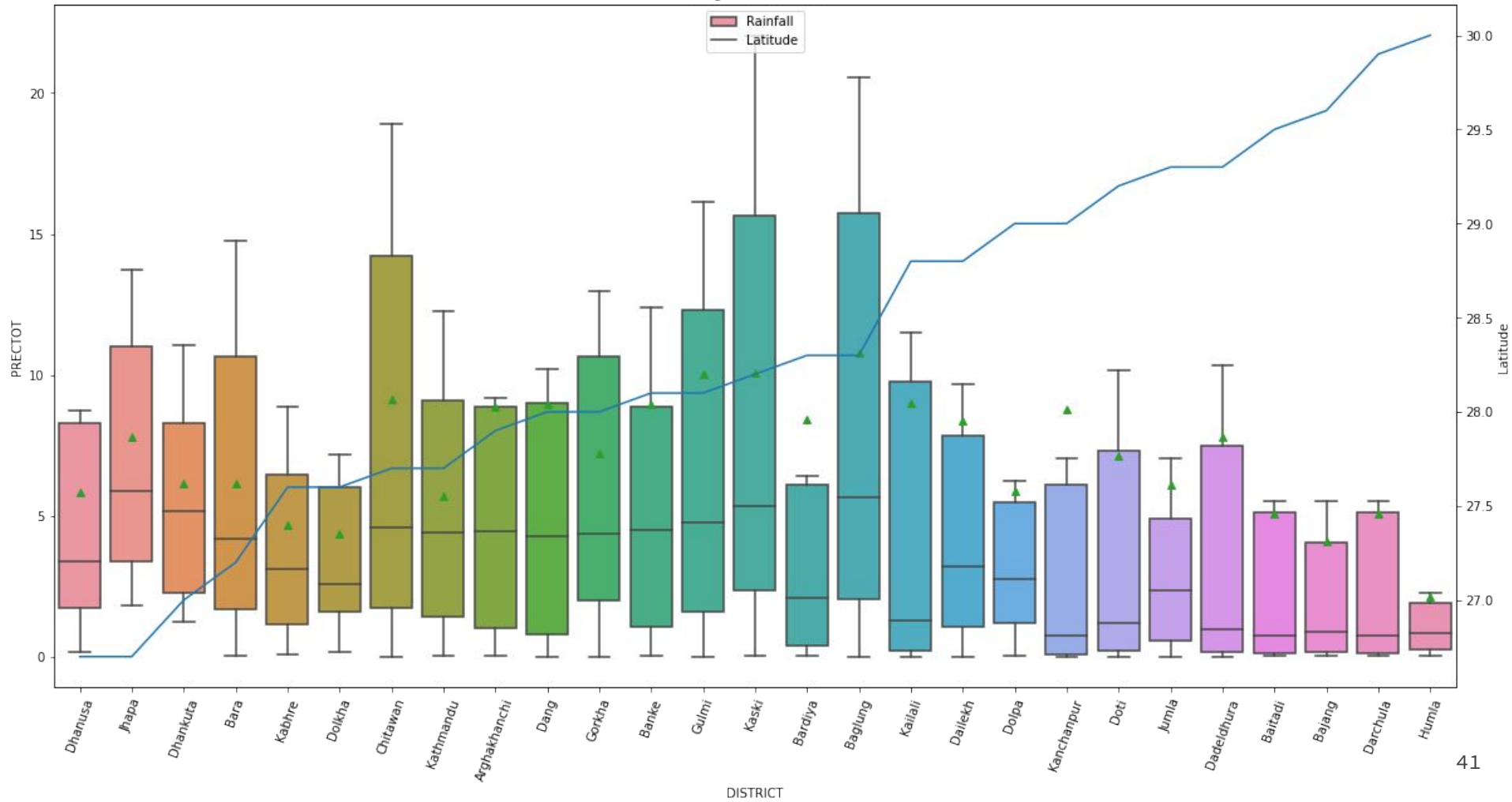
T2M vs Latitude



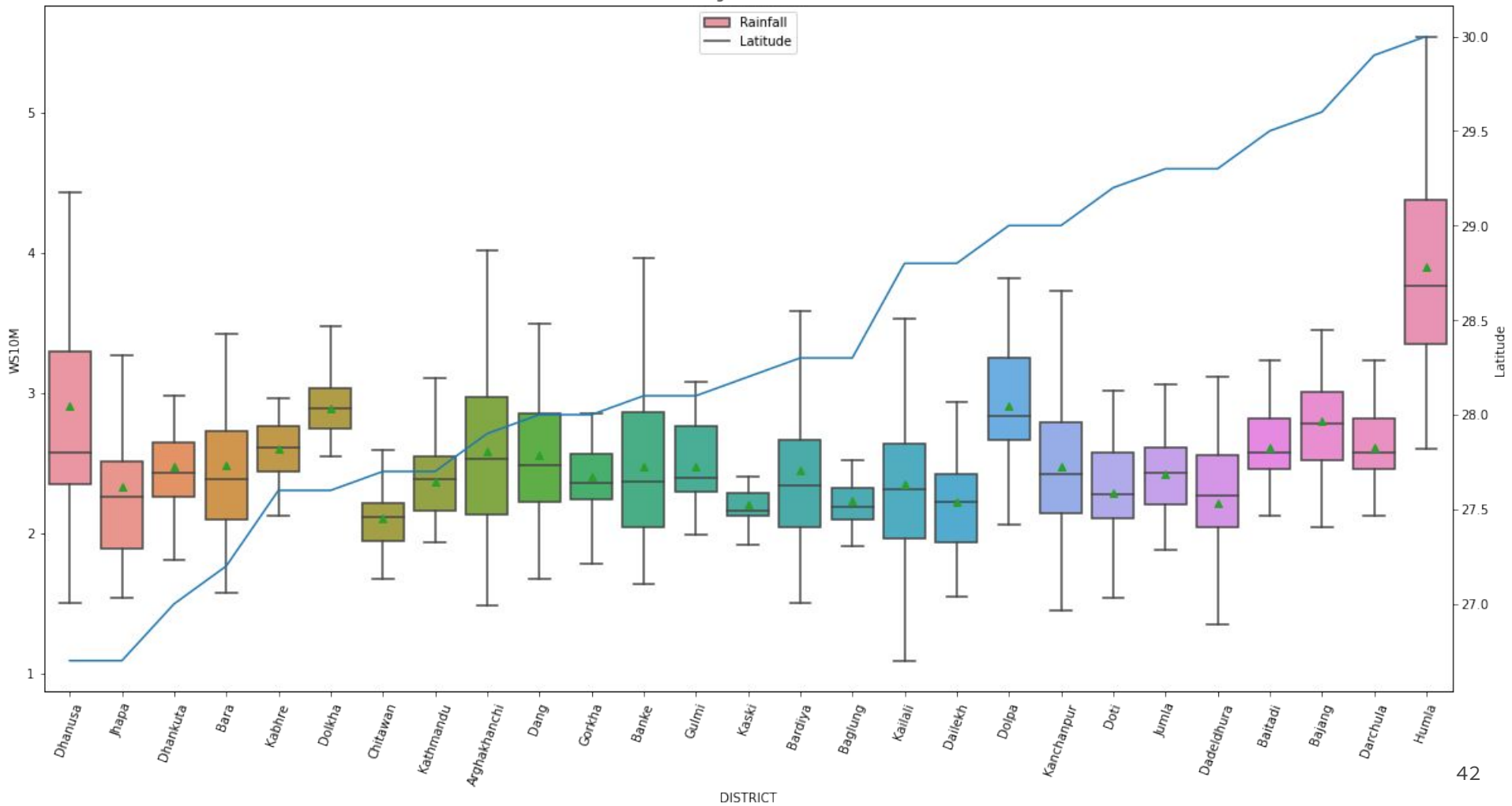
T2M vs Longitude



Height vs Rainfall



Height vs Wind



That's all until now.