



IRONHACK LISBON
12|2019

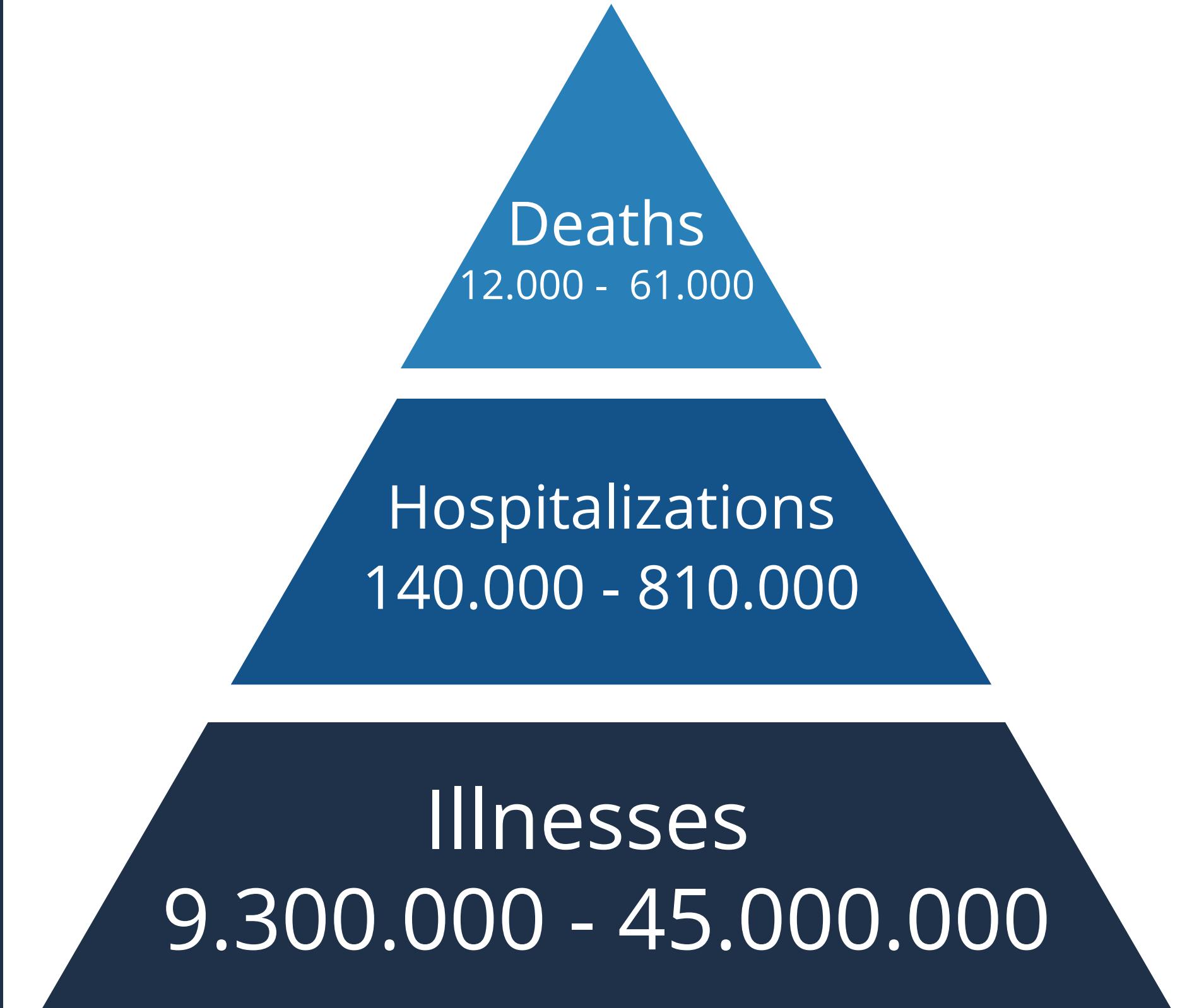
FLU FORECASTING

A presentation by Constanze Krüger

THE FLU

Infectious disease caused by
an influenza virus.

Influenza should be reported
within 24 hours.



RESOURCES



FLUVIEW DATA

Positive Influenza Tests Reported
Centers for Disease Control and
Prevention



AIRPORT WEATHER DATA

Detailed Historical Data
National Centers For Environmental
Information



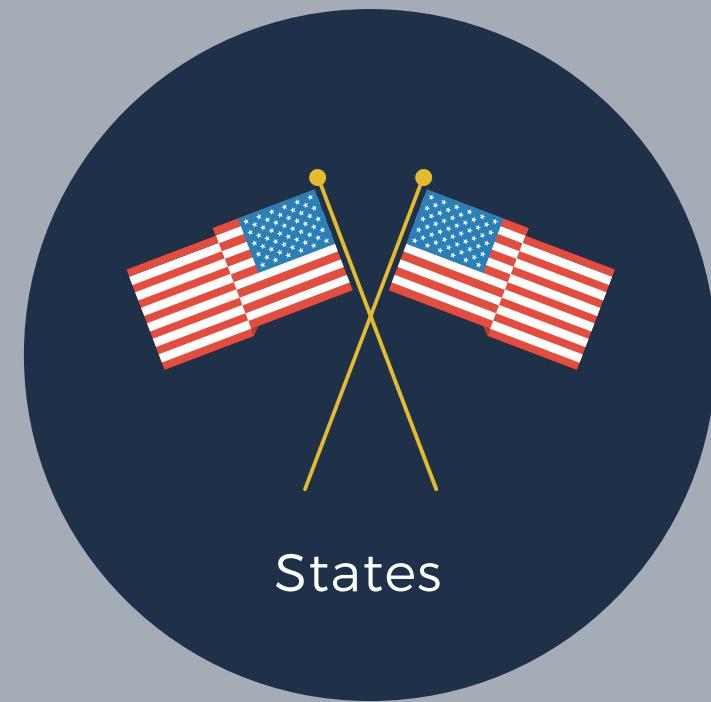
MACHINE LEARNING

Logistic Regression
Analyzing Time Series Data
SARIMA Forecast

LOGISTIC REGRESSION TEST ACCURACY 81%



Week



States



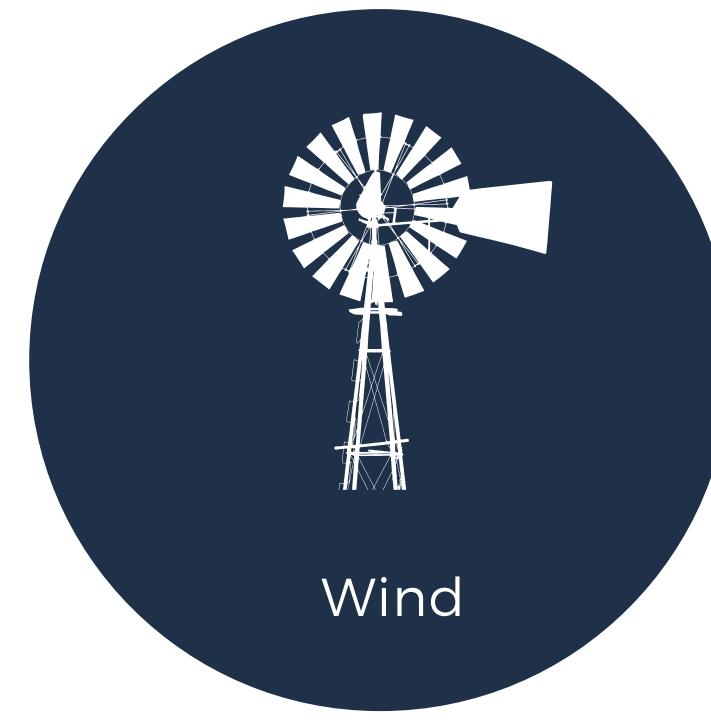
Min Max Temp



Rain

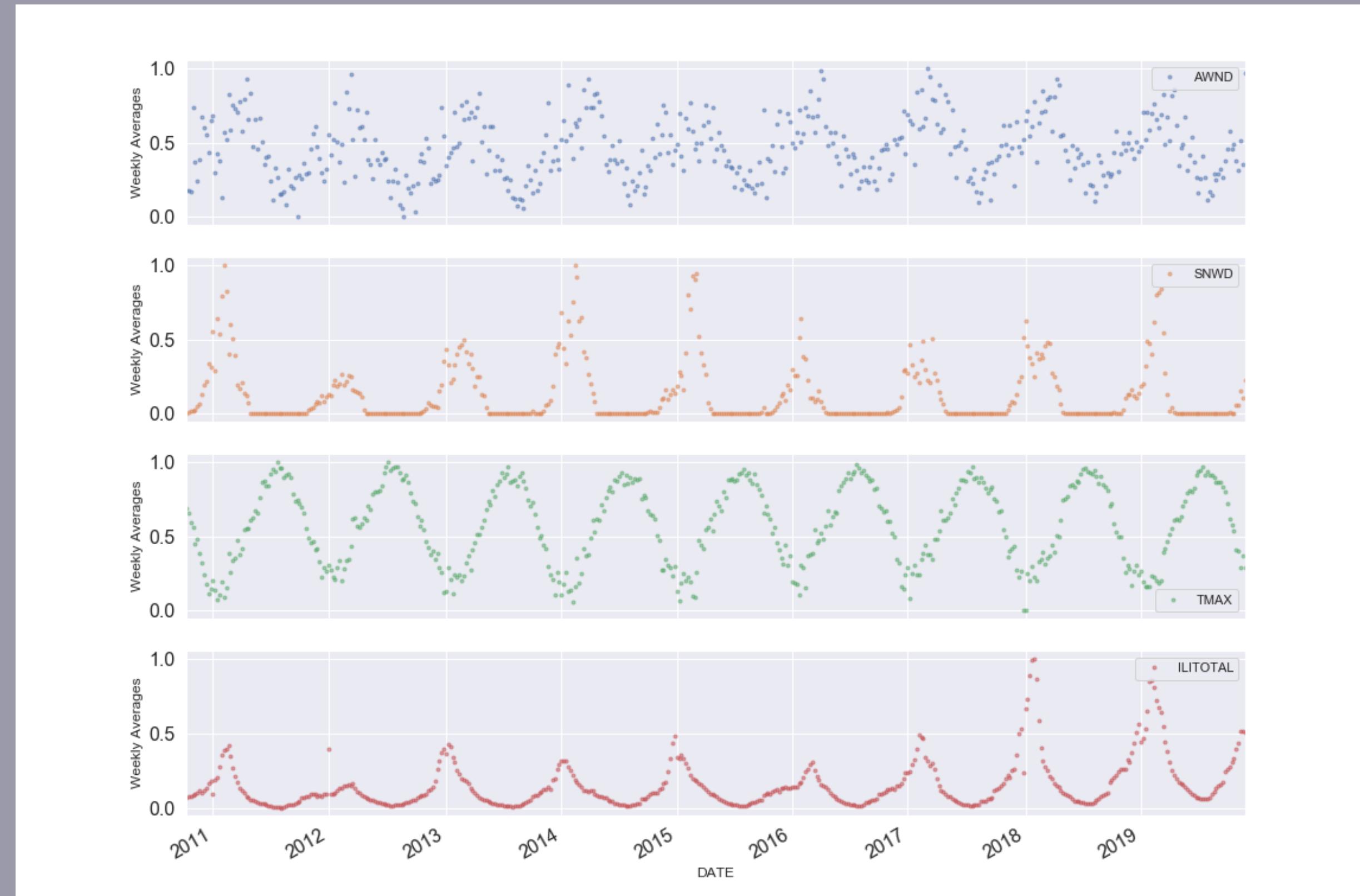


Snow

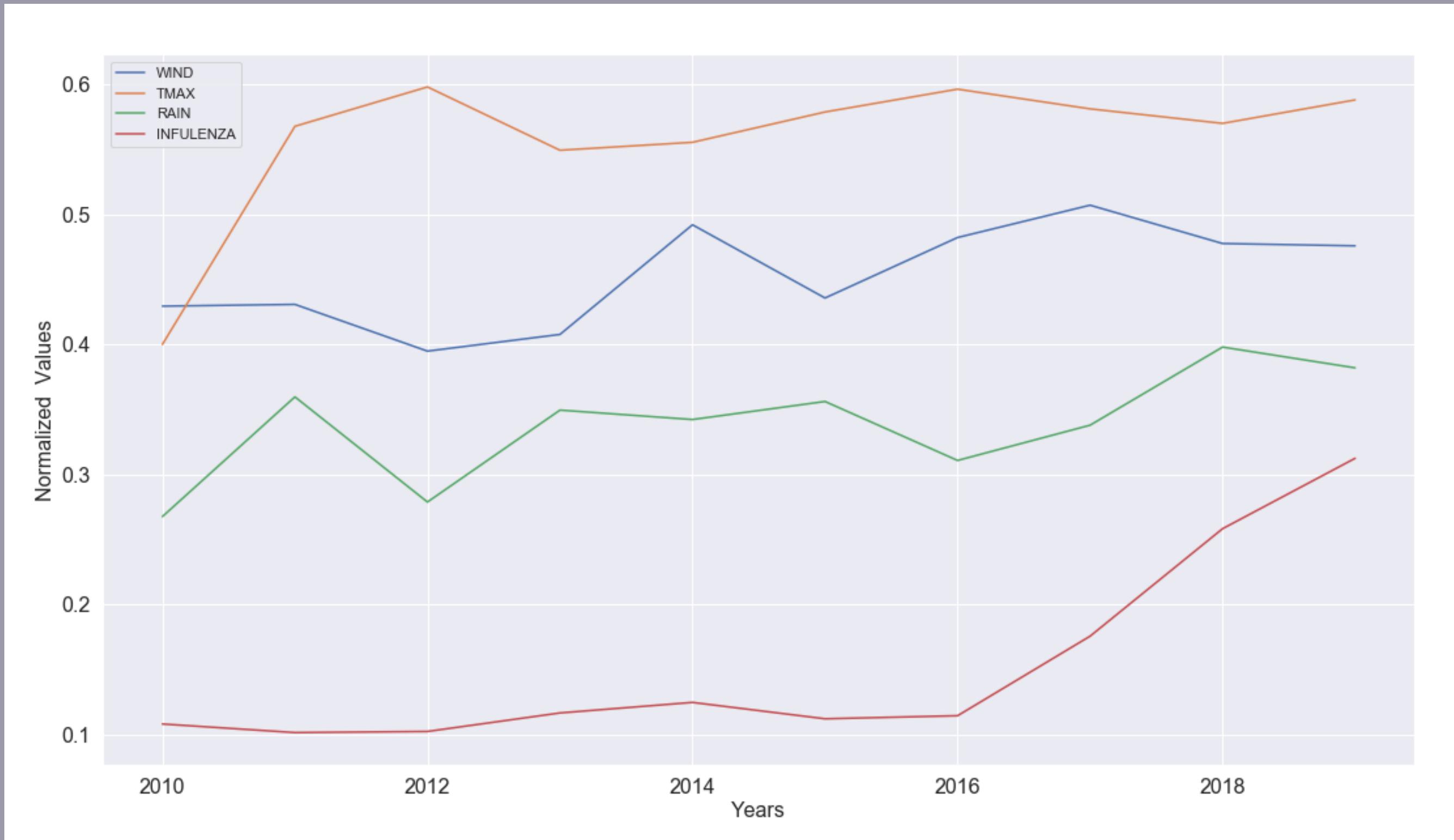


Wind

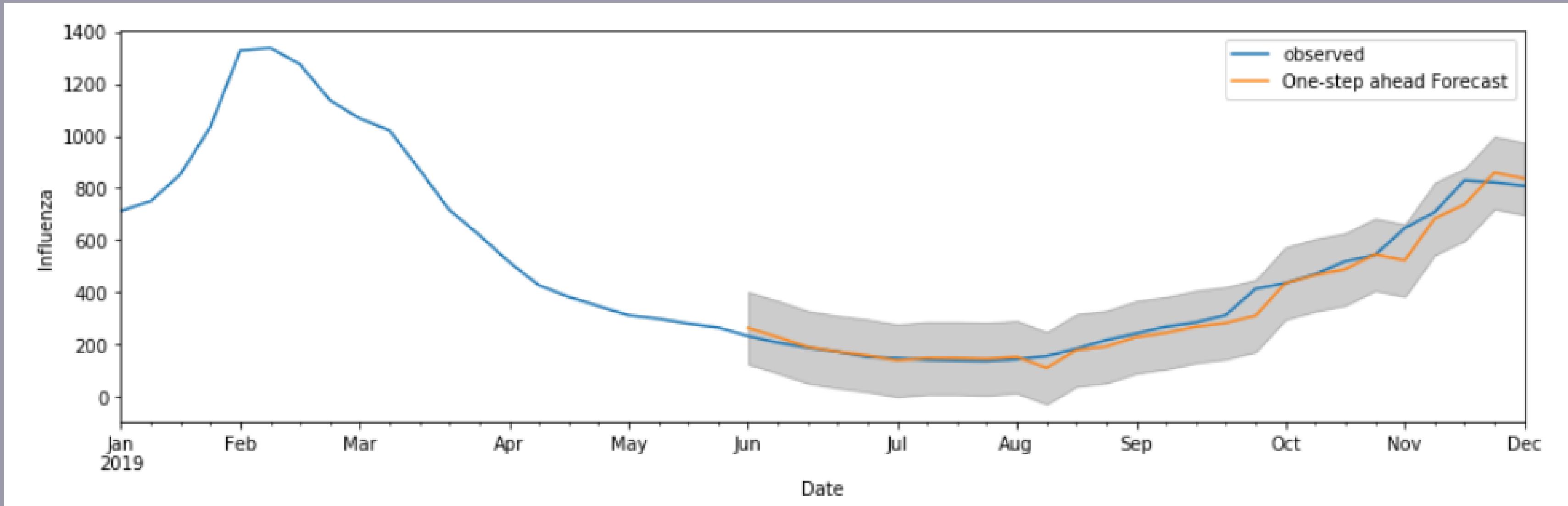
TIME SERIES DATA



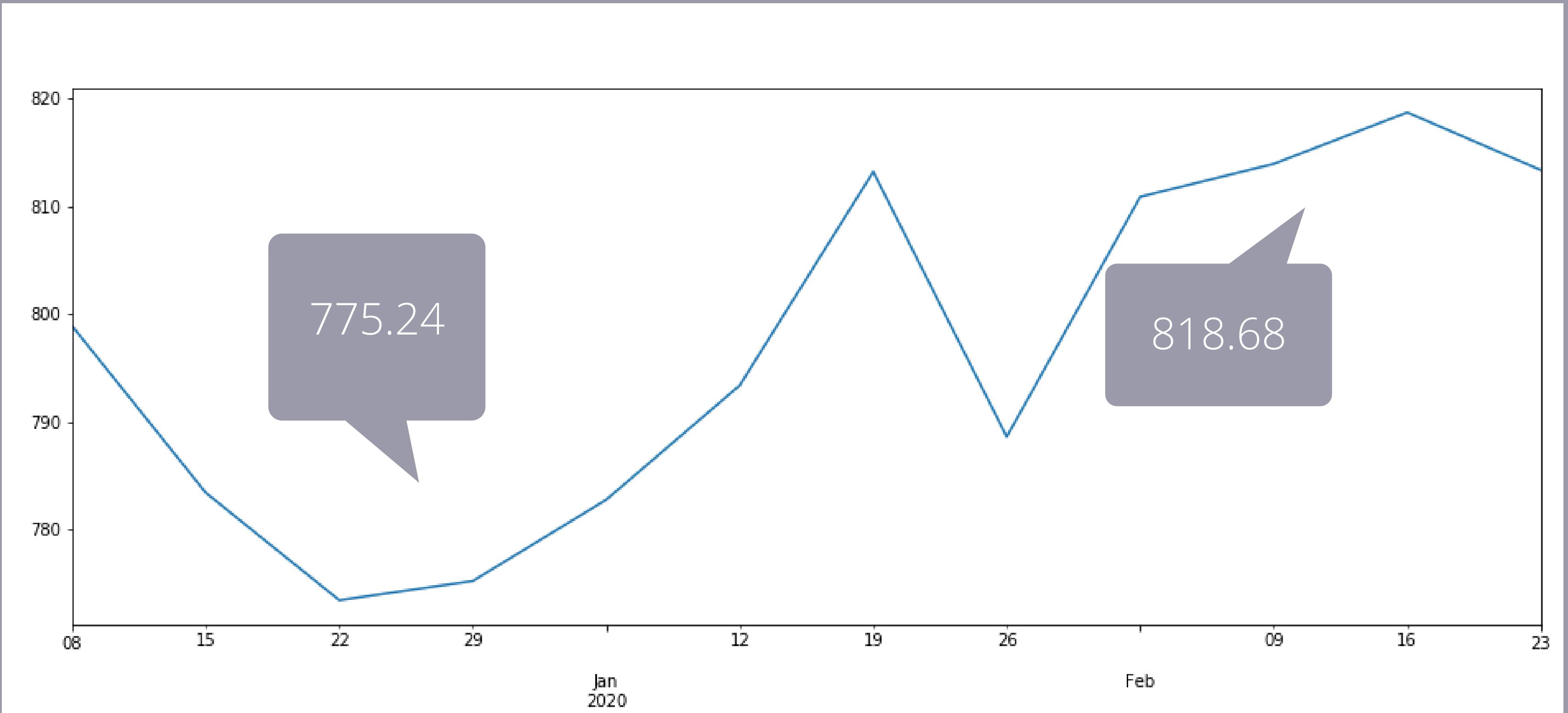
TIME SERIES DATA



SARIMA FORECAST MODEL



SARIMA FORECAST





FUTURE PERSPECTIVES

Involving more Data:

Weather forecast

Demographic data

Vaccination test results

People vaccinated

THANK YOU!

Questions?

SOURCES

THE FLU

<https://www.cdc.gov/flu/about/burden/index.html>

DATA

<https://gis.cdc.gov/grasp/fluvieew/fluportaldashboard.html>

<https://www.ncdc.noaa.gov/cdo-web/search?datasetid=GHCND>