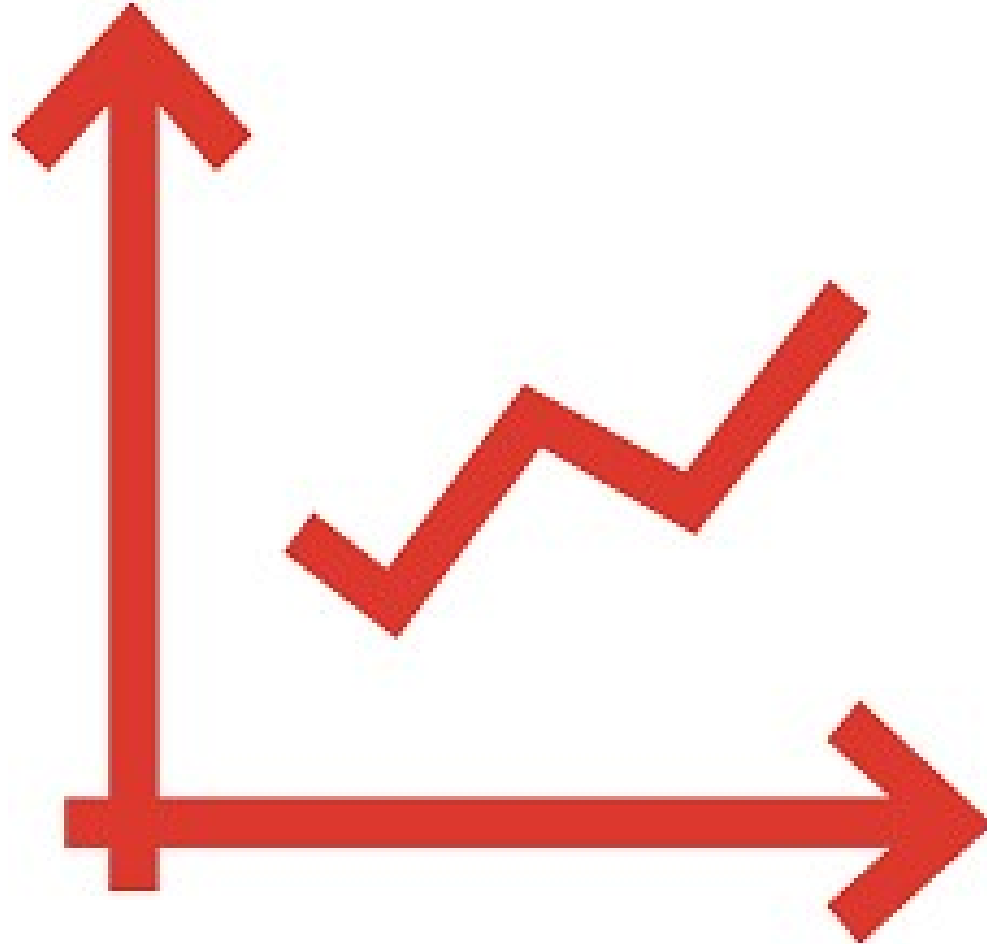


Hungarian Chickenpox Cases Forecasting



Presented by Artem Ramus

Background

Abstract: A spatio-temporal data set of weekly chickenpox cases from Hungary. The data set consists of a county-level adjacency matrix and time series of the county-level reported cases between 2005 and 2015.

Source:

Benedek Rozemberczki, The University of Edinburgh, benedek.rozemberczki '@' gmail.com

Link to the dataset at UCI:

<https://archive.ics.uci.edu/ml/datasets/Hungarian+Chickenpox+Cases>

Introduction

The dataset consists of a county-level adjacency matrix and time series of the county-level reported cases between 2005 and 2015. There are 2 specific related tasks: County level case count prediction and nation level case count prediction.

Attributes are weekly counts of chickenpox cases in Hungarian counties.

Data Set Characteristics: Time-Series

Number of Instances: 521

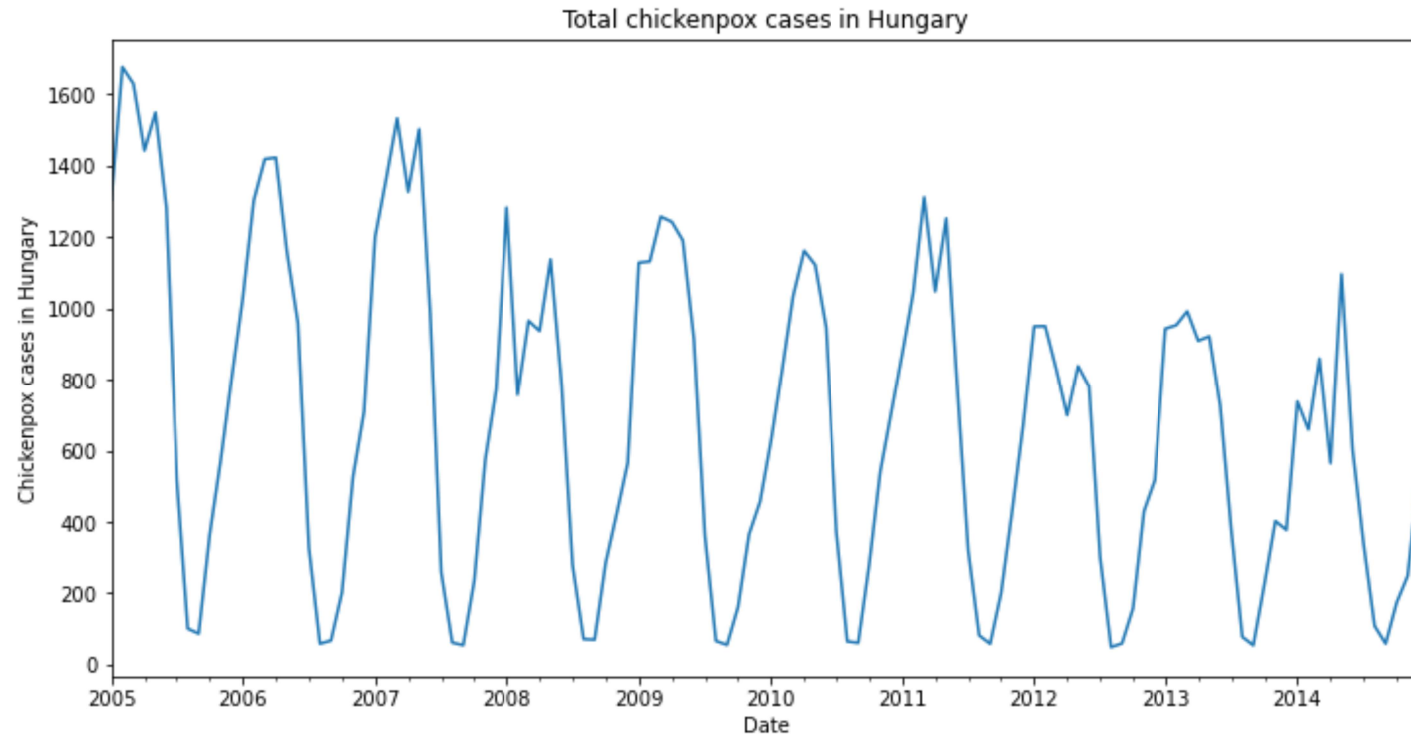
Area: Life

Attribute Characteristics: Real

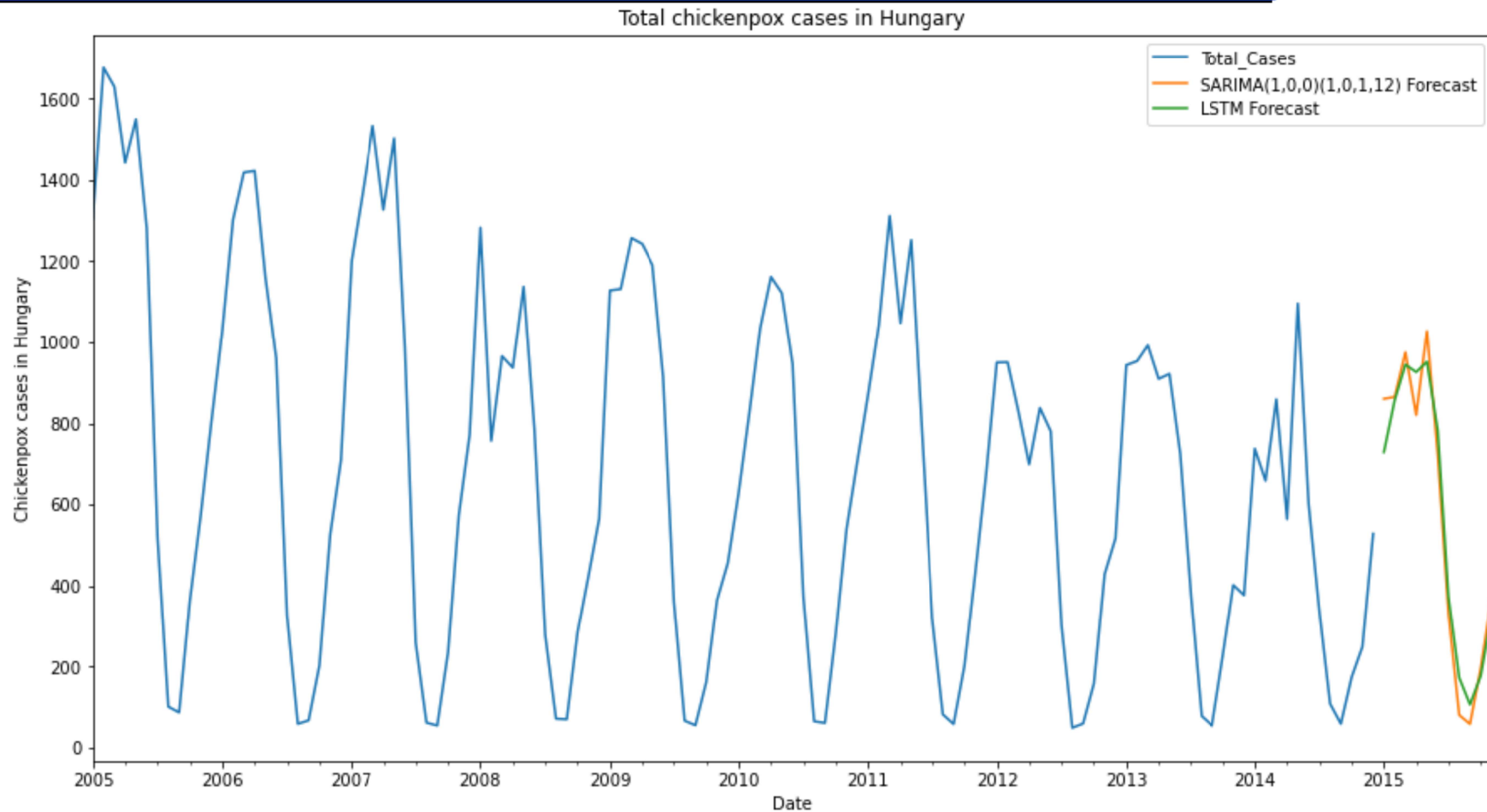
Number of Attributes: 20

Methodology

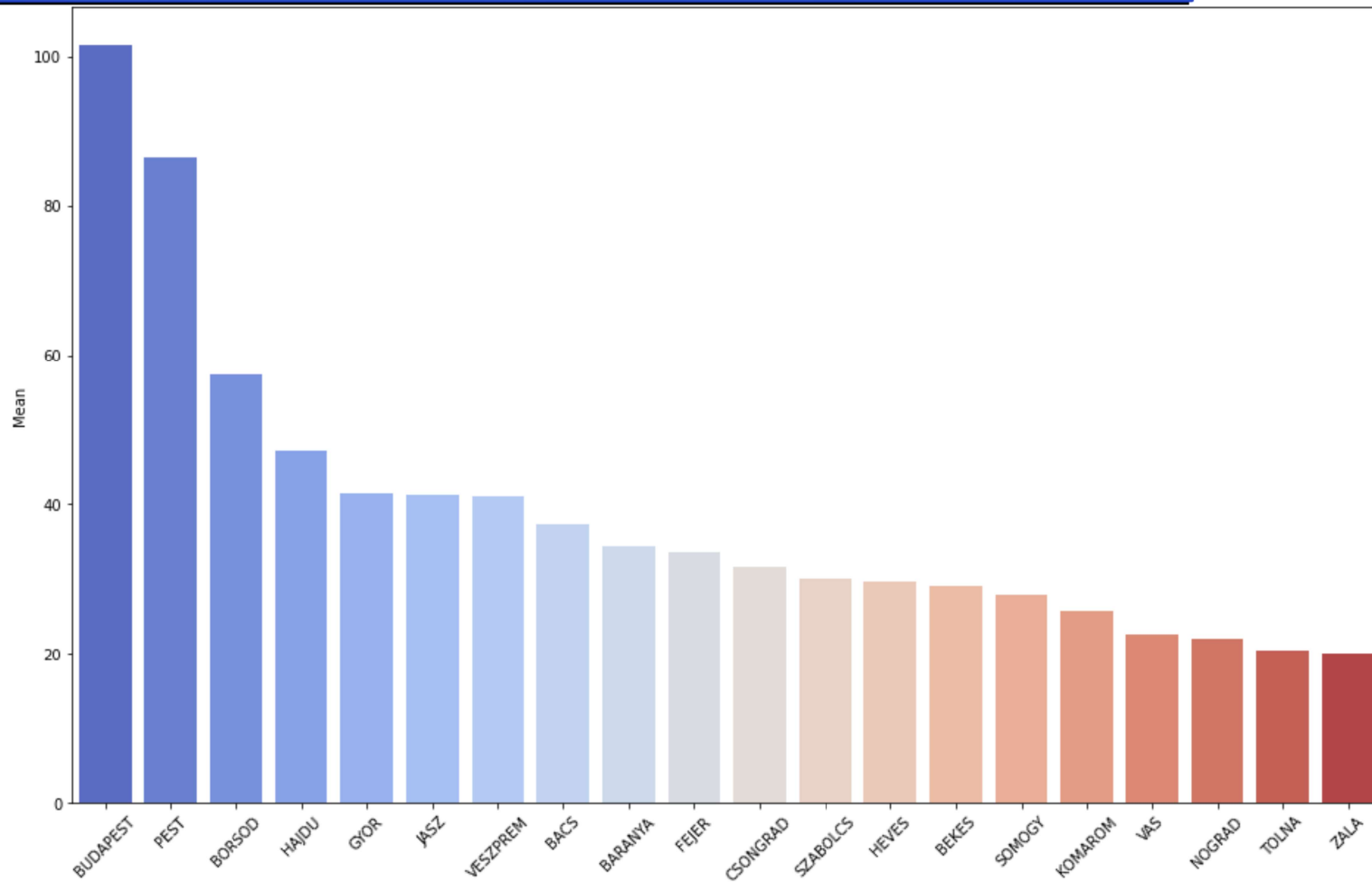
- The sampling was changed from weekly to monthly
- SARIMA and RNN LSTM models were trained on train-set
- 1 year prediction was made



Performance of the Model



Exploratory Data Analysis



Summary and Conclusions

SARIMA and LSTM RNN showed similar performance

Budapest and Pest areas cases count is prominently higher than others

The end

Thank you for your attention!