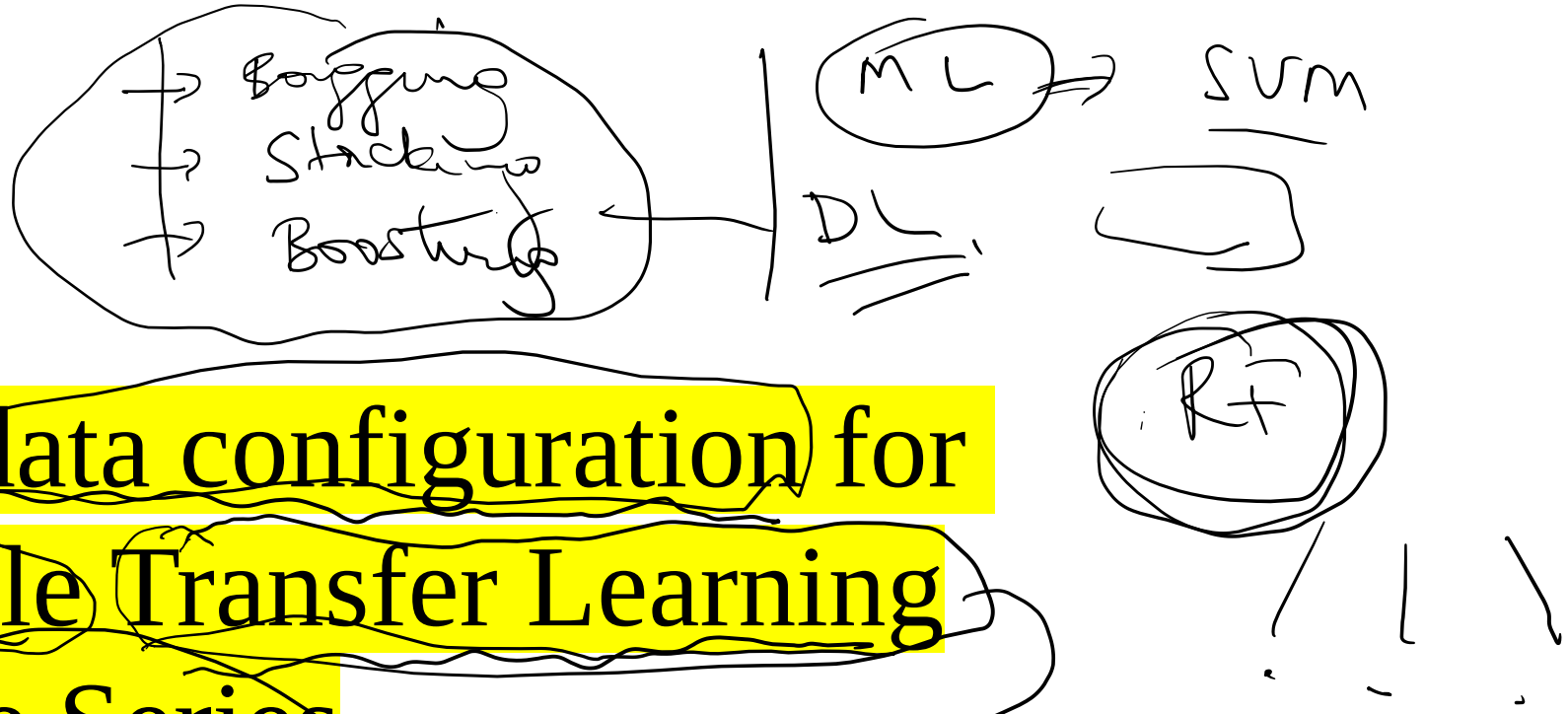
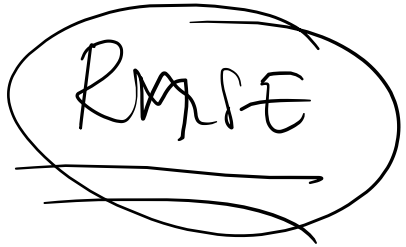


A metadata configuration for Ensemble Transfer Learning for Time Series

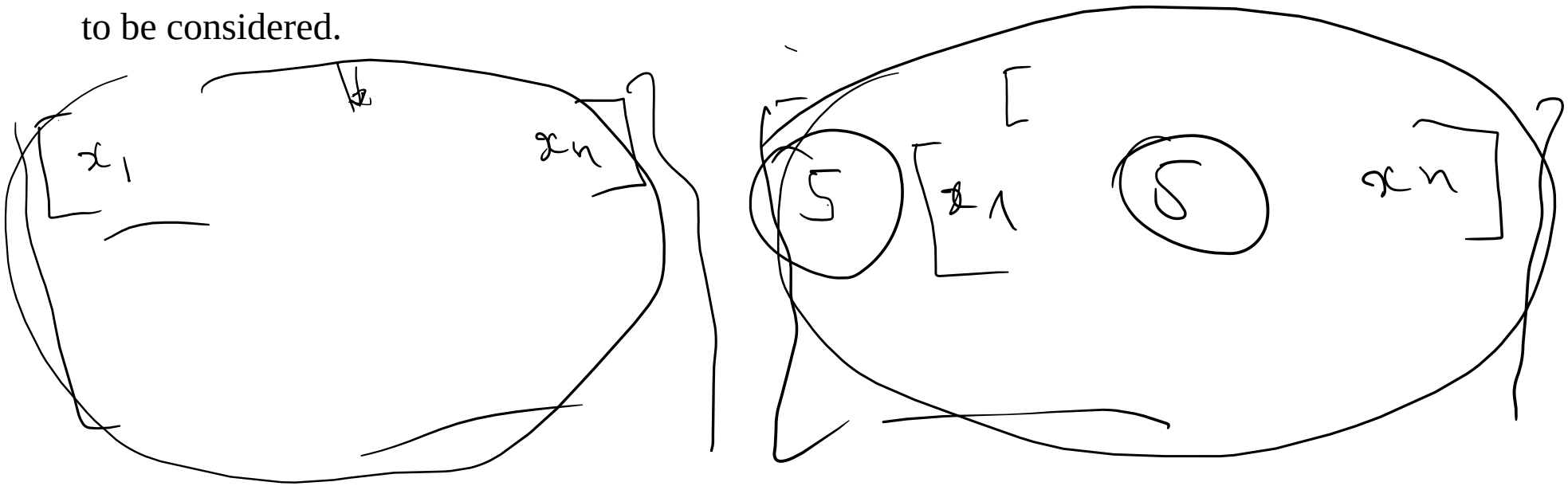
Vianney Kambale & David Krame



A metadata configuration for Ensemble Transfer Learning for Time Series.

Abstract.

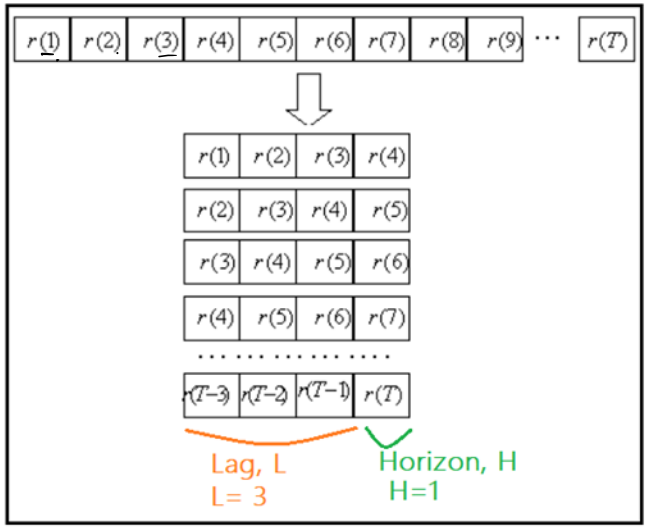
- This work intends to analyze the effect of using metadata instead of real data for time series forecasting.
- The Lags and horizons data of the time series are replaced a *8-point size data* made of the boxplot values plus the first value, the middle value and the last value of the lag and of the horizon.
- In constituting these metadata, various lengths of lags and horizons are considered (lag sizes: 9, 19, 41, 101, Horizon sizes: 1, 9, 19); that is Lag-Hor tuples combinations of the given lag sizes and Horizon sizes to be considered.



Practical Park (1/4):

Using Python, write a function(s):

- which transforms a TS data into a ML Supervised Learning data (using for e.g. windowing)



Practical Park (2/4):

Given the Time series:

1	2	3	4	5	6	7	8	9

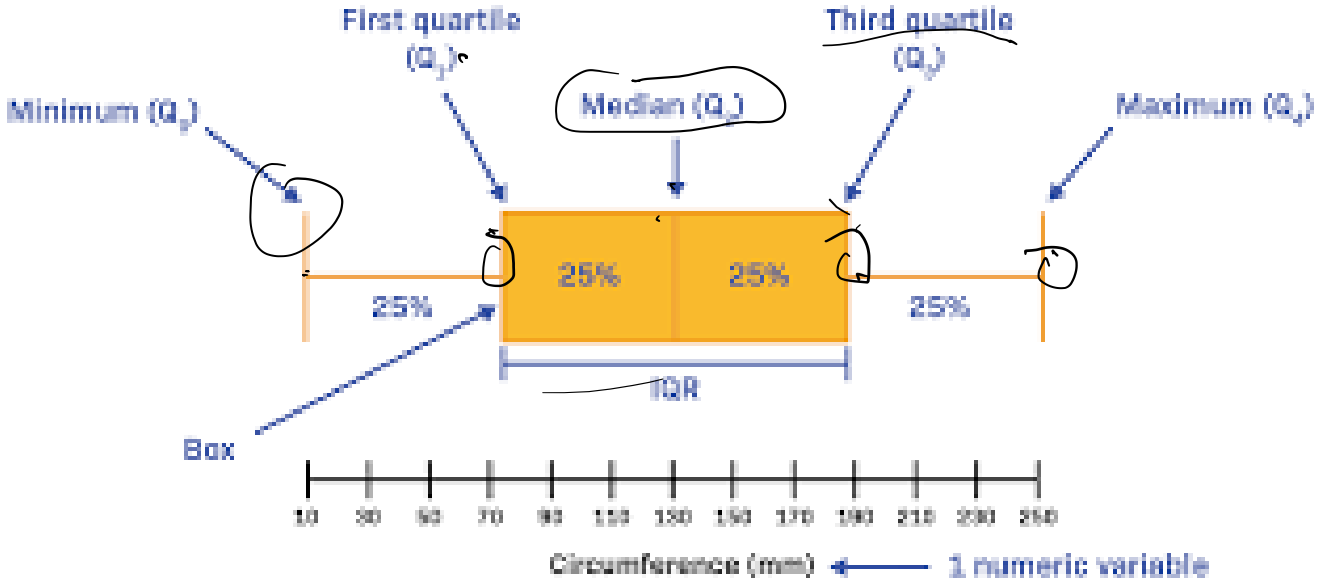
Scenario 1: Lag , L=3, Horizon = 1

1	2	3	4
2	3	4	5
3	4	5	6
4	5	6	7
5	6	7	8
6	7	8	9

Scenario 1: Lag, L =3, Horizon, H =2

1	2	3	4	5
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8
5	6	7	8	9

Series


First quartile (Q_1)
Third quartile (Q_3)
Median (Q_2)
Minimum (Q_0)
Maximum (Q_4)
25%
25%
25%
25%
IQR
Box
10
30
50
70
90
110
130
150
170
190
210
230
250
Circumference (mm)
1 numeric variable