

Time Series Pattern Recognition Exercize 6

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1 Exercize

- Predict the sunspot (yearly) data using an ESN model in an autoregressive mode
- Change the spectral radius in the range $[0, 1.2]$
- Plot the RMSE against the spectral radius
- Report the optimal spectral radius value and the corresponding RMSE value.

2 RMSEs

spectral radius	0.0	0.5	0.8	0.9	0.95	0.975	1.0	1.05	1.1	1.2
AR-RMSE	0.2532	0.2034	0.1667	0.1477	0.1357	0.1331	0.1327	0.1421	0.1999	0.4264

3 Plot original/estimate/predict Time series data

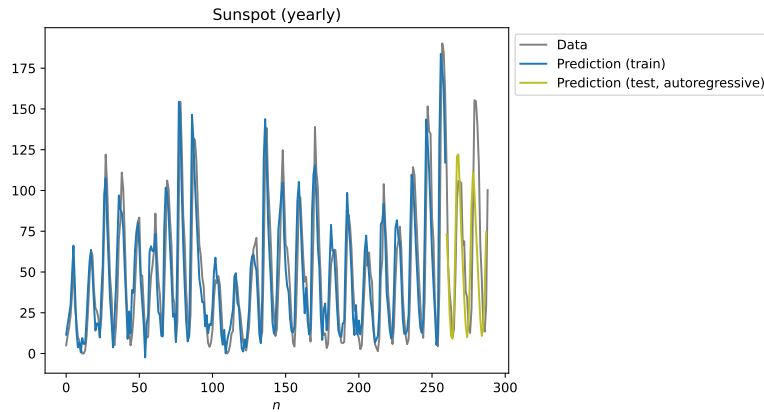


Figure 1: spectral radius = 1.0