SNS College of Technology

Coimbatore – 35

19BAZ782 – Analytics for Everyone

Unit V – Predictive Analytics II

Topic…Guess…???

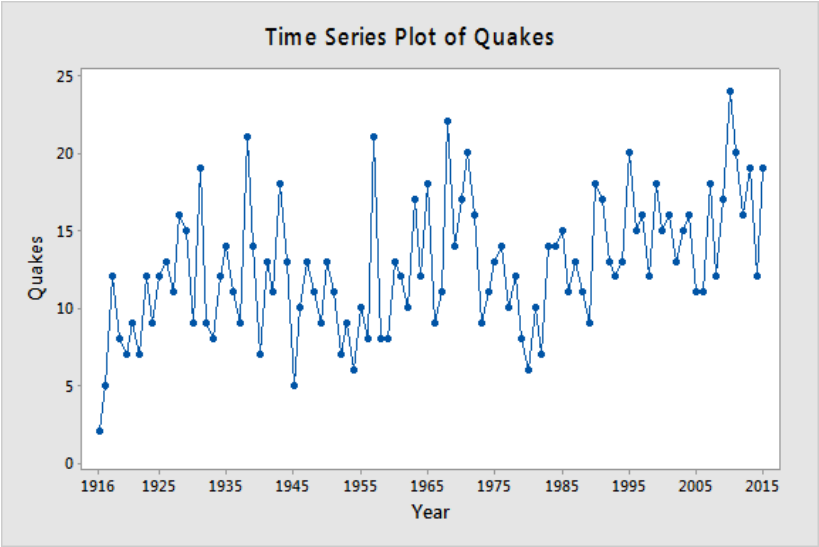
Presented by

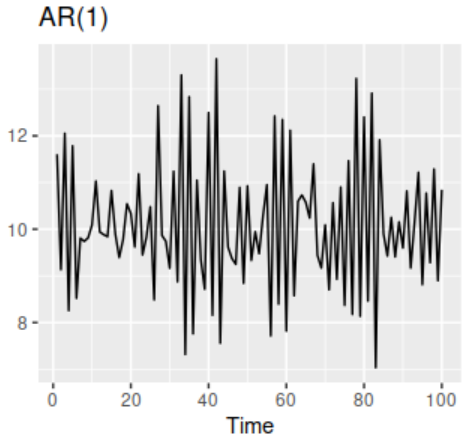
Dr.P.Krishnaveni
Design Thinker

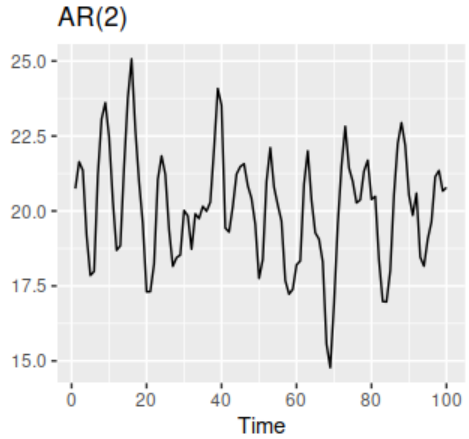
Recall

- Regression
- Auto regressive Model
- AR Model lags

Guess the topic...???



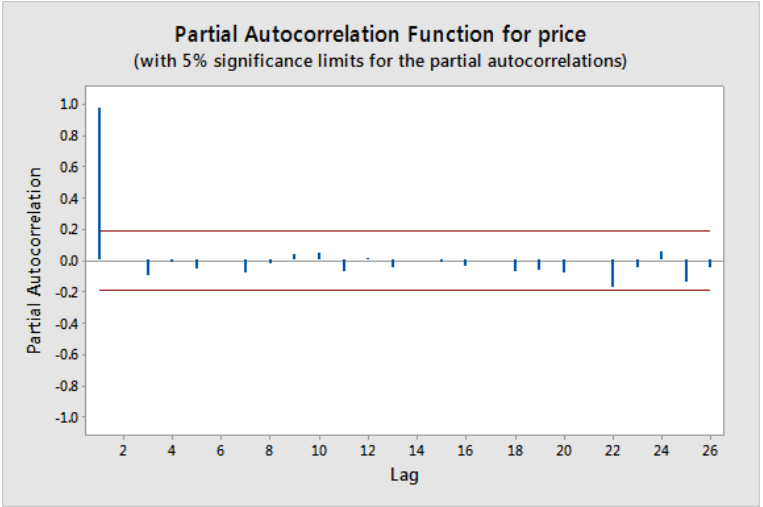




Correlation

Partial Auto Correlation

- PAC of Lag K is an AC between Y_t and Y_{t-k}
- Remove intermediate values
- Plot is called as PAC Function [PACF]

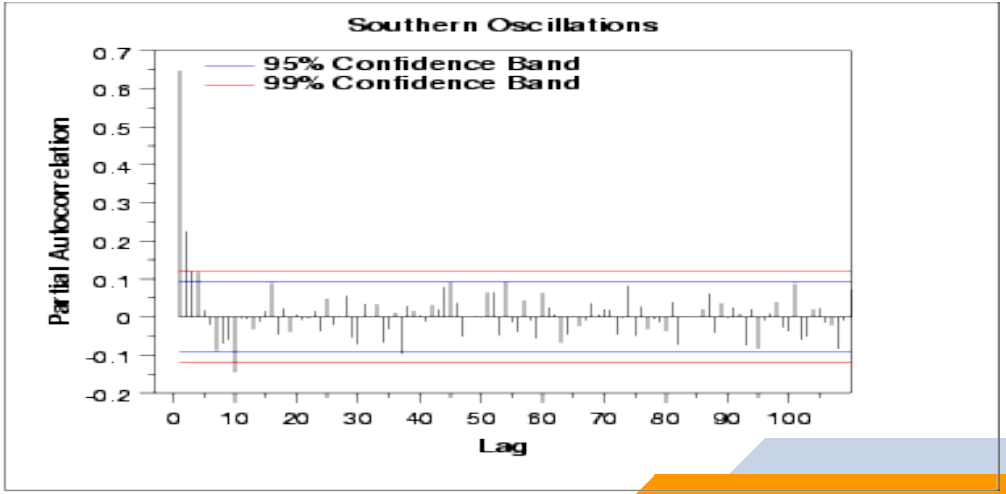


Partial Auto Correlation

- Partial Auto correlation of lag k is auto – correlation between Y_t and Y_{t+k}
- To test whether the autocorrelation at lag k is significantly different from 0…
- For any k, reject Ho if

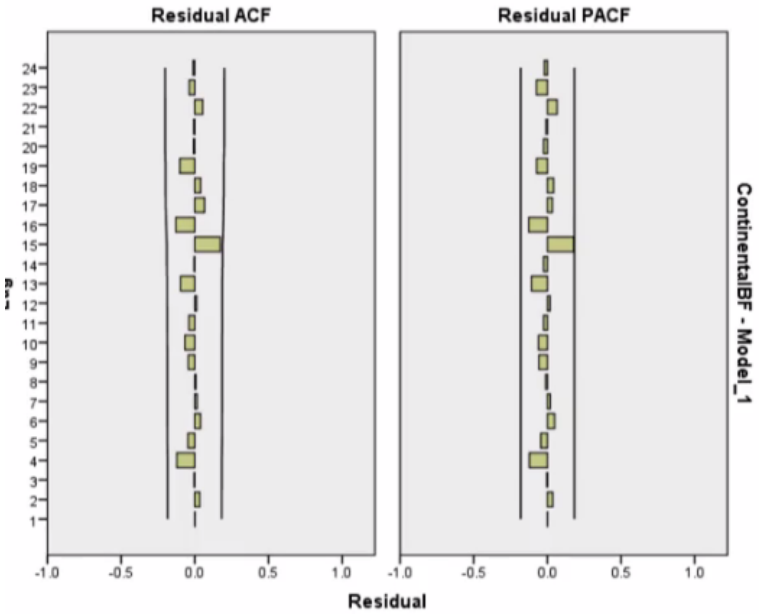
$$H_0: \rho_k = 0$$

$$H_A: \rho_k \neq 0$$



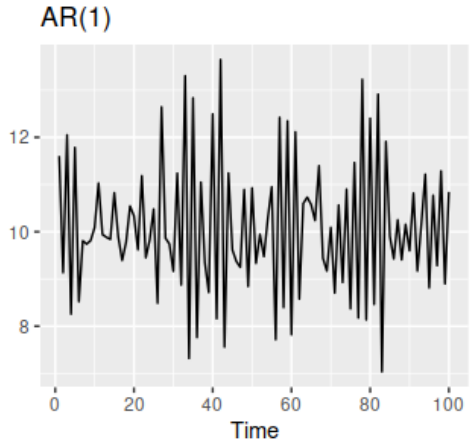
White Noise

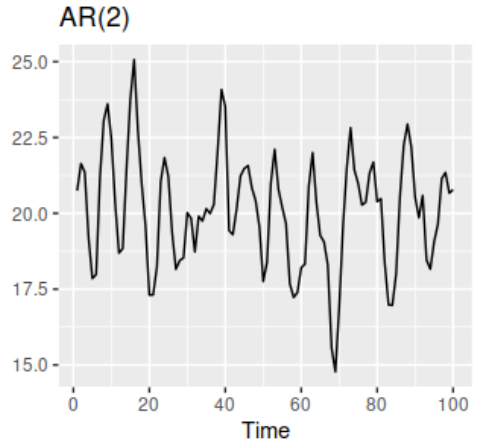
- Data uncorrelated across time that follows normal distribution
- Mean 0 and Constant Standard Deviation
- In forecasting we assume residuals are white noise



AR Model

- First order regression
- $y_t=\beta_0+\beta 1 y_{t-1}+\epsilon_{t.}$
- Second order regression
- $y_t=\beta_0+\beta 1 y_{t-1}+\beta 2 y_{t-2}+\epsilon_t$
- Kth order regression
- t−1,t−2,…,t−kt−1,t−2,…,t−k.





Assessment

Difference between Correlation and Auto correlation

Summary

- Correlation
- Partial Auto Correlation
- White Noise

Reference

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