



SNS College of Technology

Coimbatore - 35



19BAZ782 – Analytics for Everyone

Unit V – Predictive Analytics II

Topic...Guess...???

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Design Thinker



Recall

- Correlation
- Partial Auto Correlation
- White Noise

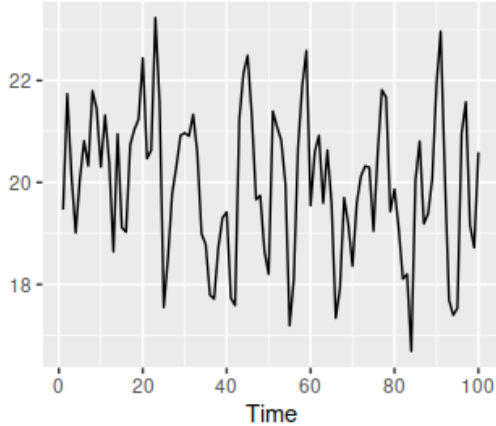


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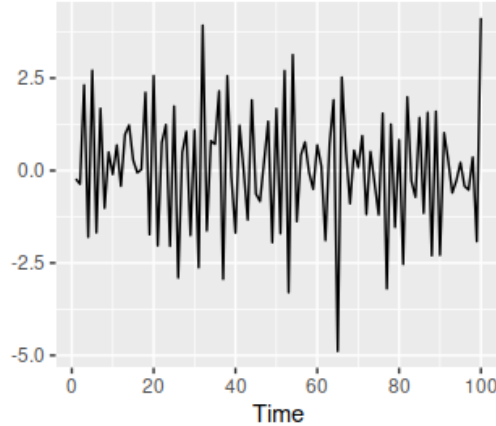


Guess the topic...???

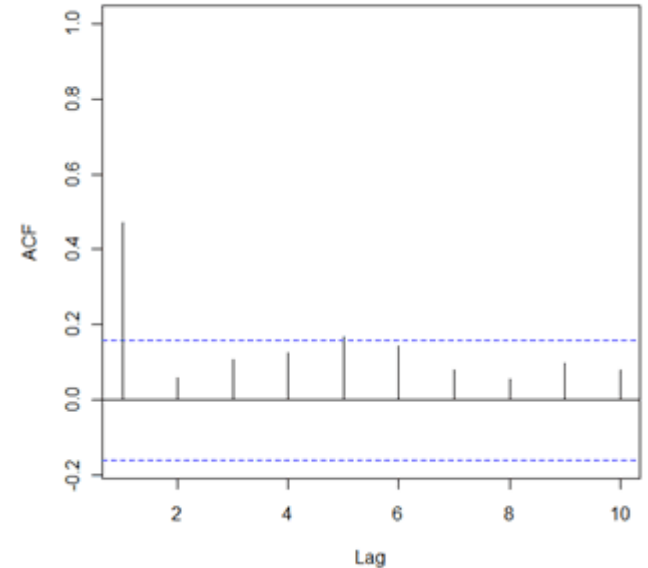
MA(1)

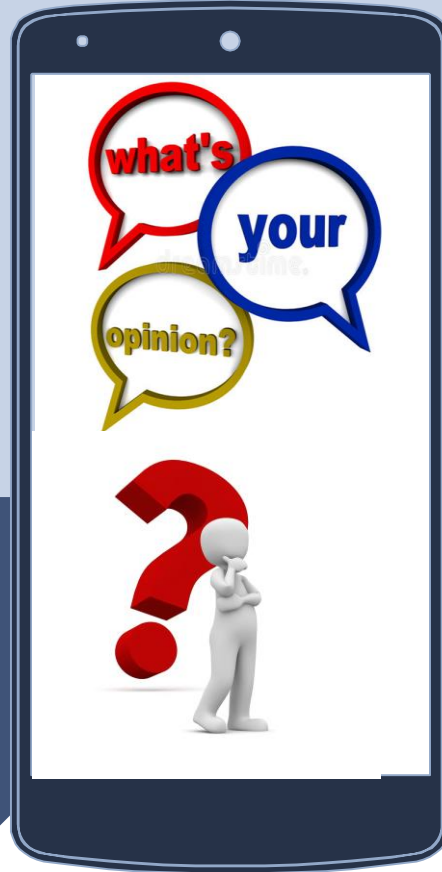


MA(2)



ACF for simulated sample data





Autocorrelation



Moving Average Model

First order moving average, MA(1), is given by:

- Is a time series regression model
- Y_t is a linear function of past error

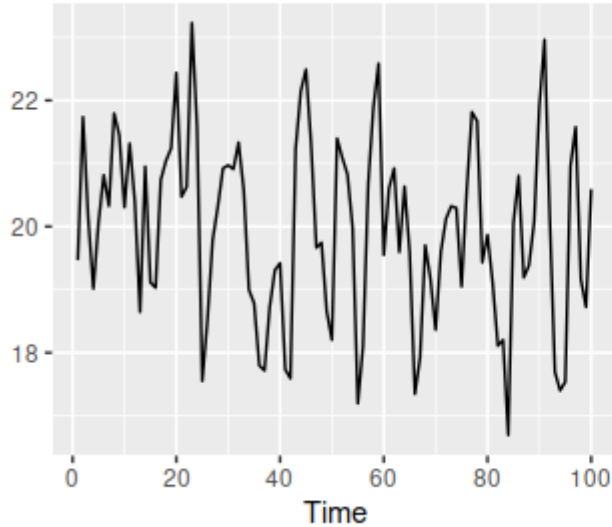
$$Y_t = \beta_0 + \beta_1 \varepsilon_{t-1} + \varepsilon_t$$

$$Y_t = \beta_0 + \beta_1 \varepsilon_{t-1} + \beta_2 \varepsilon_{t-2} + \dots + \beta_q \varepsilon_{t-q} + \varepsilon_t$$

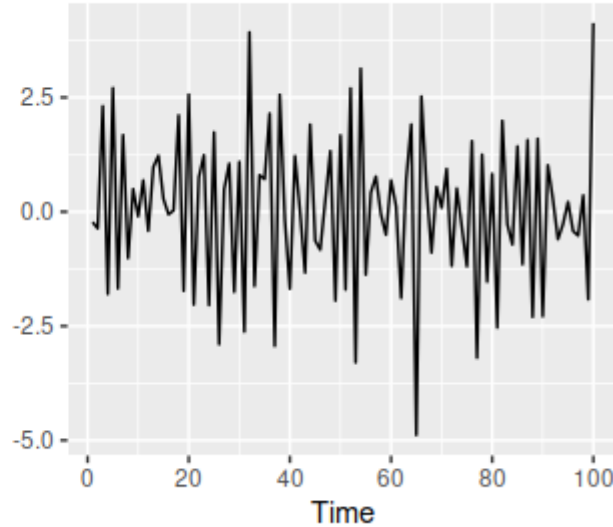


Moving Average Model

MA(1)



MA(2)



$$Y_t = \beta_0 + \beta_1 \varepsilon_{t-1} + \beta_2 \varepsilon_{t-2} + \dots + \beta_q \varepsilon_{t-q} + \varepsilon_t$$



Summary

- Autocorrelation
- Moving Average Model
- Regression Model

SUMMARY





Reference

- <https://otexts.com/fpp2/MA.html>
- <https://online.stat.psu.edu/stat510/lesson/2/2.1>
- <https://365datascience.com/moving-average-model/>



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*Thank
you*