Week 3: ARIMA Models (Total video duration=2.7 hours. You will be required to spend 30 minutes/day along with practicing datasets and quizzes)

Learning Outcomes from the Module:

After learning from this module, learners will be able to understand:

- Understanding the theory of ARIMA Model
- Python Implementation of ARIMA model on a dataset
- Performing EDA on a time series data
- Building a ARIMAX model on a dataset
- Building a SARIMAX model on a dataset and seeing how it is different from the other two models.

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Mentor Session Duration:	Faculty Name:	No. of videos:
2 hours	Dr. Abhinanda Sarkar	5

Video No.	Video Name	Duration of the video(mins)	Topics Covered	Conceptual or Hands On
1	ARIMA Approach	27:43	We will understand a class of model called Autoregressive and Moving Average model which is applicable on time series and regression problems. It looks for correlation in data.	Conceptual
2	ARIMA Models - Hands on Python	33:23	Python Implementation of ARIMA models and compare, look at ho forecast looks like using tractor sales dataset to	Conceptual+Hands-On
3	Time Series Analysis_EDA_Hands-on	29:04	Understanding how to do EDA on a Time Series data, how to build a time series model and linking time series analysis with regression methods through Store sales case study.	Conceptual+Hands-On
4	Time Series Analysis_ARIMAX_Case Study-on	41:48	Building time series models on Store sales data including models that take advantage of regression.	Conceptual+Hands-On
5	Time Series Analysis_SARIMAX_Case Study	28:20	Working on dataset with exogenous variables to build a SARIMAX model	Conceptual+Hands-On

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Few textbooks that you can refer to:

1

Time Series Analysis

By James Hamilton

2

Introduction to Time Series and Forecasting

by Brockwell and Davis