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| --- | --- | --- | --- | --- | --- |
| **Exp.**  **No.** | **Name of Experiment** | **Date of Allotment**  **of experiment** | **Date**  **of**  **Evaluation** | **Remarks** | **Signature**  **of**  **Faculty** |
| 1 | Exploratory data analysis of time series data. | 20/07/2023 | 27/07/2023 |  |  |
| 2 | Handling missing values in data using: Forward fill method (Last observation carried forward), Backward fill method (Next observation carried backwards), Linear interpolation, Spline interpolation, Seasonal decomposition, and interpolation. | 27/07/2023 | 03/08/2023 |  |  |
| 3 | Decompose Time-Series to See Components (Trend, Seasonality, Noise, etc), Dicky-Fuller Test for Stationarity, Remove Trend (Logged Transformation, Power Transformation, Applying Moving Window Functions, Applying Moving Window Function on Log Transformed Time-Series, Applying Moving Window Function on Power Transformed Time-Series, Applying Linear Regression to Remove Trend) | 03/08/2023 | 17/08/2023 |  |  |
| 4 | To Remove Seasonality (Differencing Over Log Transformed Time-Series, Differencing Over Power Transformed Time-Series, Differencing Over Time-Series with Rolling Mean taken over 12 Months, Differencing Over Power Transformed & Mean Rolled Time-Series, Differencing Over Linear Regression Transformed Time-Series),), Dicky-Fuller Test for Stationarity | 17/08/2023 | 24/08/2023 |  |  |
| 5 | Implementation of Auto regression (AR) model and using Auto correlation function (ACF) to find the order of AR model. | 24/08/2023 | 14/09/2023 |  |  |
| 6 | Implementing Autoregressive integrated moving average (ARIMA) model, also implement Auto- ARIMA model. | 14/09/2023 | 28/09/2023 |  |  |
| 7 | Implementing Random Forest Regressor Model for time series Forecasting | 28/09/2023 | 05/10/2023 |  |  |
| 8 | Implementing 1D CNN for time series Forecasting | 05/10/2023 | 12/10/2023 |  |  |
| 9 | Implementation of multivariate forecasting using Vector AutoRegressive (VAR) model | 12/10/2023 | 19/10/2023 |  |  |
| 10 | Time series forecasting using Recurrent neural network (RNN) and LSTM (Long short-term memory) | 19/10/2023 | 26/10/2023 |  |  |
| 11 | Open Ended Experiment – BVP dataset | 19/10/2023 | 26/10/2023 |  |  |