INTERPRETATION for ARIMA

Dataset:

The data is the price history and trading volumes of the fifty stocks in the index NIFTY 50 from NSE (National Stock Exchange) India. All datasets are at a day-level with pricing and trading values split across .cvs files for each stock along with a metadata file with some macro-information about the stocks itself. The data spans from 1st January, 2000 to 30th April, 2021. We will be using the stock price data of BHATIARTL stock at day level for our analysis. Link to dataset:
https://www.kaggle.com/datasets/rohanrao/nifty50-stock-market-data/data?select=BHARTIARTL.csv

Analysis:

We follow the following analysis steps:
1. import the file
2. attach the data file
3. Use the req. Libraries
4. apply test to check stationarity
5. apply auto.arima to best fit ARIMA model
6. create a model
7. diagnostic check
8. forecast the series

Results:

The following the accuracy results of the model:
```

# ME       RMSE      MAE MPE MAPE      MASE        ACF1
# Training set -1.274929e-05 0.02313971 0.0151898 NaN  Inf 0.7360721 -0.0003315241
```

We have some outlier values in the dataset, due to which we get a bit of inconsistency in the histogram and time series plot value of the residuals, but it has very less affect on the accuracy of the model, thus the model can be acceptable as accurate.