
Auto-ts

Prerequisite

1. Python 3 Programming
2. Machine Learning Algorithms
3. Time Series Algorithms
4. Sklearn, Pandas library

What is Auto-ts?

- It is an open-source python library basically used to automate Time Series Forecasting. It will automatically train multiple time series models using a single line of code, which will help us to choose the best one for our problem statement.
- It finds the optimal time series forecasting model using genetic programming optimization.
- It trains naive, statistical, machine learning, and deep learning models, with all possible hyperparameter configurations, and cross-validation.
- It performs data transformations to handle messy data by learning optimal NaN imputation and outlier removal.
- Choice of the combination of metrics for model selection.

Most common models that Auto Time Series runs

- PyFlux Model.
- Non-Seasonal ARIMA Model.
- Seasonal SARIMAX Model.
- Basic Machine Learning Model.
- Vector Autoregressive Model.
- Facebook Prophet Model.

Benefits of using Auto Time Series library

- It performs automated dataset preprocessing. It will automatically transform the input dataset into a format the model can use. It removes noise and unnecessary information in the dataset.
- It can handle missing values and outliers. Auto-TS handles the missing values to ensure we have a complete dataset. It also removes outliers that are not within the dataset range.
- It trains high-accuracy models. Auto-TS produces reliable and accurate models.
- It selects the optimal time series model. Auto-TS automatically runs multiple time series models listed above. It then automatically selects the optimal model. This model will give the most accurate results.
- Automatic hyperparameter tuning and configurations. Auto-TS automatically fine-tunes the model parameters. It ensures the model gives the best accuracy score.

THANK YOU