

FORECASTING POT [AI Tool]

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Solo project

Abstract

This is an idea of making a tool which feeds time series based data and gives the forecasting values which is helpful for making data driven decision in any kind field.

An AI based auto forecasting tool like ML BOX which uses an ensemble of machine learning algorithms to optimize forecasts.

Its just like fortune teller which uses time-based data to tell future



Introduction

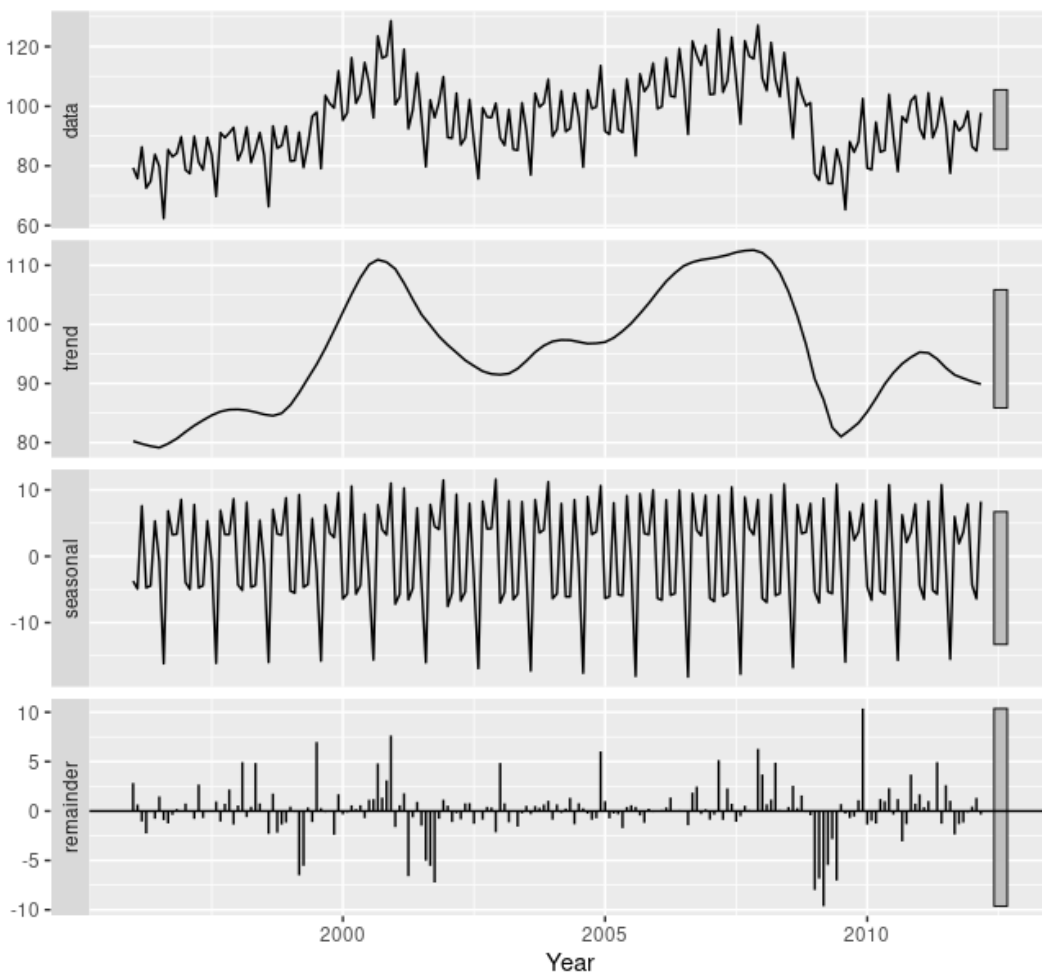
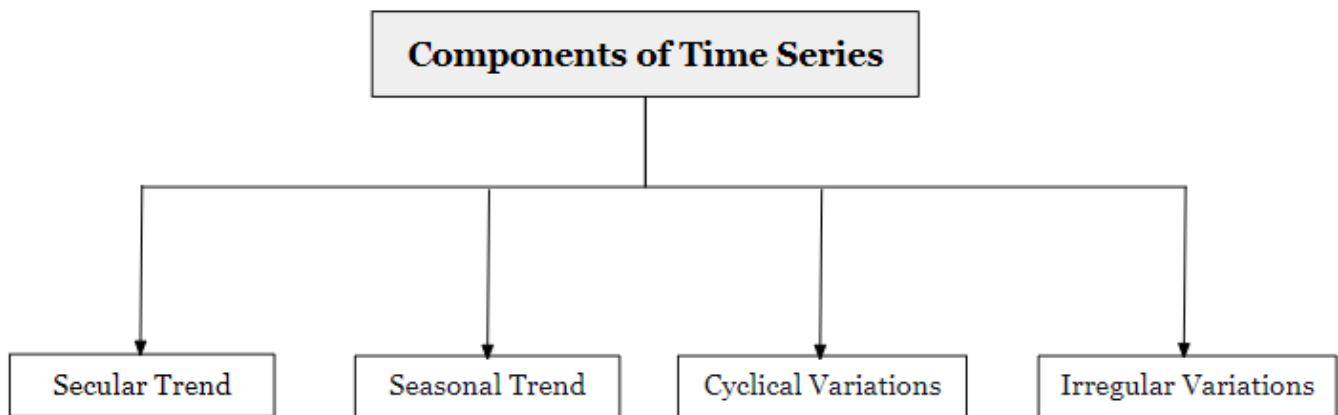
This forecasting pot is all about automating time series forecasting process. Time series forecasting is a technique for predicting past trends based on the assumptions that the future trends will hold similar to historical trends.

industries from energy to retail to transportation and finance today rely on time series forecasting for projecting product demand, resource allocation, finance performance, predictive maintenance, and countless other applications

Time series forecasting

We should learn how components like Trend, seasonal and irregular in the data first. we have to find the values of hyperparameters for the data and give those to available models.it is going to forecast the future. based on those values the business is altered or adjusted or updated or upgraded which ever is necessary for the time being.

- **All these steps are mechanical and repetitive across time series forecasting problems.**



- This ai tool which is going to do everything by itself and directly show forecasted values by just feeding the data

HOW

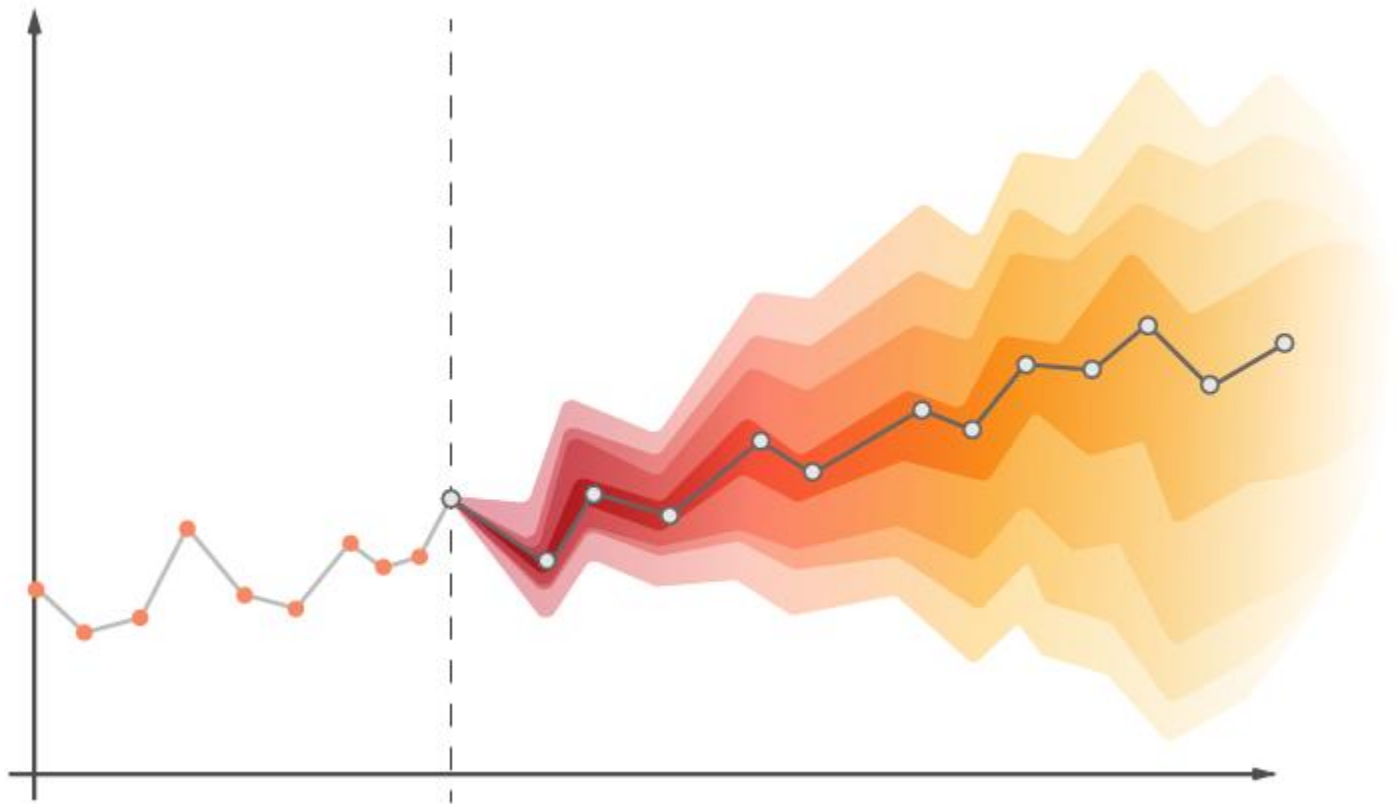
There are many models available and this tool is not going to select the model because we can not know which model is going to work better. this tool after feeding the data it directly date target variable with time column as index and its independent features if highly dependent with target variable. It is going to put the data to run on every model at same time and test the results. It is going to pick whichever is going to do better.

PROCESS

It works on data streams in real time to provide forecasts in the moment

This tool needs a cloud to perform the whole process

- 1) It picks the data
- 2) It processes the data like picking the target and setting the time column into index
- 3) It is going to find the basic information about the data components (p,d,q)
- 4) It is going to feed the data into models with hyperparameters at a time and run all parallelly
- 5) It is going to test the results and picks better
- 6) It is going to show results using dashboards using business intelligence tools like powerBI



Notes:

- ✓ This tool not only gives output but also provides an option to analyze and asses the business based on pre-determined option of different kind of businesses.
- ✓ It has different option to predict from next second to next half-yearly time
- ✓ It can forecast the stocks in real-time but stock market is very sensitive
- ✓ It will be very handy and a lot of time and money is saved
- ✓ It will be capable of assessing the the whole business and highlight which part or division is not working well based on comparison from other part of data

Code :

It would take some months to create the whole environment and this project is not all about code but a whole new infrastructure

This is just half-boiled code for time series forecasting

<https://www.kaggle.com/jasthinaveen0640/google-stock-forecasting-arima-auto-arima-lstm>