

CHALLENGE

XGBoost + Prophet vs NYC Shelter Demand

01

DATA PREP

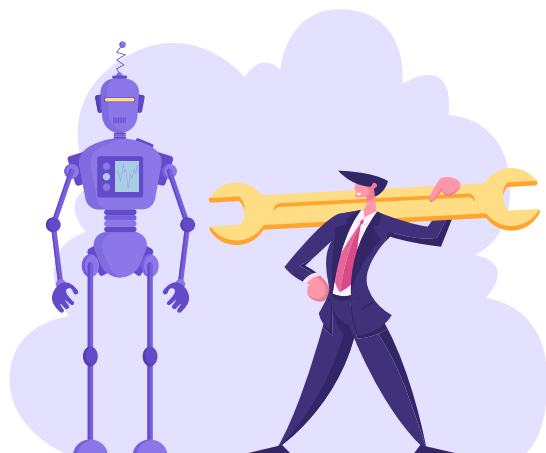
Prepare the script. Create Future Dataframe with the length of the test set. Add the regressor(s) to the dataframe



02

FORECASTING

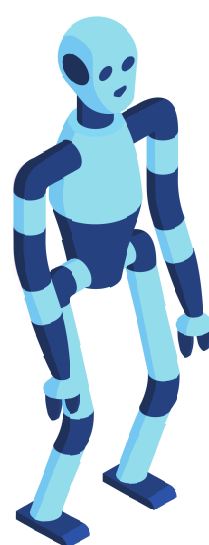
Create a dataframe with the following elements: trend, weekly, yearly, holidays and multiplicative terms. XGBoost is not good at dealing with time, so we need to get these elements to help it



03

LAST PREPARATIONS

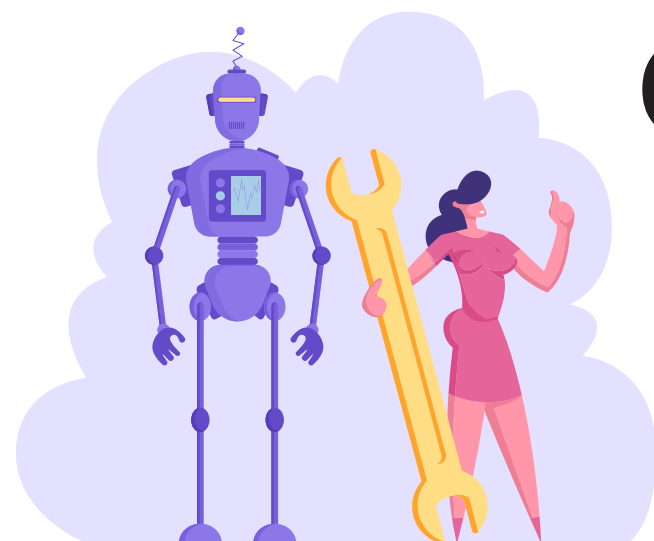
Concatenate everything with the dataframe (df). Drop the holiday-related variables that were included in the FB Prophet model and extracted later.



04

XGBOOST PREPARATIONS

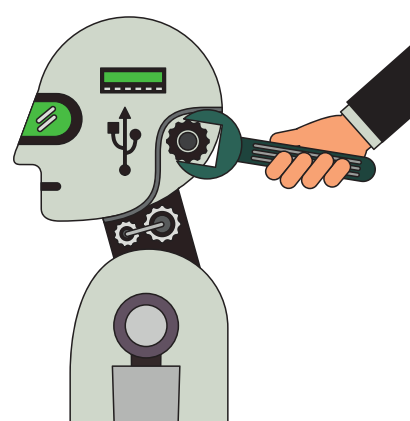
With everything extracted, create a training and test set. Next, isolate the X and Y elements. Then, combine everything creating the matrices for XGBoost



05

PARAMETERS AND MODEL

Set the parameters you want for the model. Then, you are finally really to build the XGBoost model.

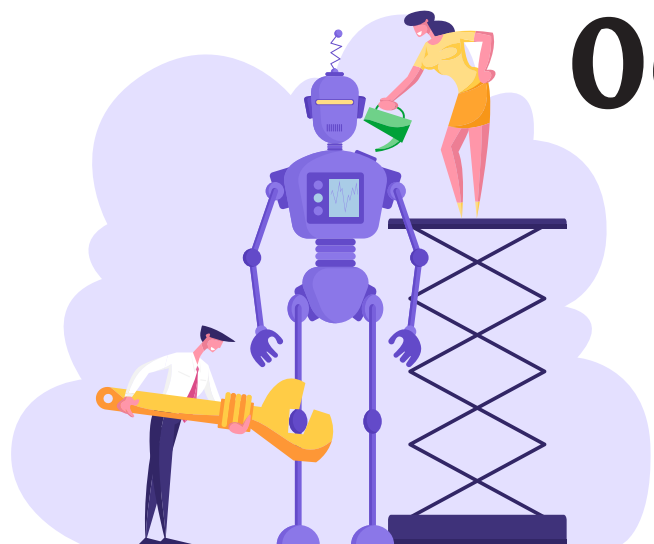


06

FORECASTING

Time to wrap it up. Forecast with the XGBoost model. Visualize the outcome with the Training and Test Set. To finish, assess the outcome using the MAPE.

Congrats, you did it!



Diogo Resende

