Analytics Vidhya Job-A-Thon Nov 2022

Name: Mahesh Chandra Duddu

Email-Id: duddumaheshchandra@gmail.com

PhNo: +91-9440642368

Thank you, **Analytics Vidhya** for providing me with this opportunity.

Proposed Approach:

The proposed approach uses Prophet model with energy as dependent feature, datetime as independent feature along with date, time and lag features.

Public score : **279.870013461037**
Private score: 343.273487507401

Data Cleaning: Null values are removed

Handling Outliers: log transform is applied on “Energy” feature as removing the outliers is not a good idea.

Feature Engineering: Using “datetime” feature, “month_cosine, month_sine, month_bins”, “hour”, “is_weekend” and few more features are obtained. Using “energy” feature, 4 lag features are obtained so that our test and train data contains the whole past data about energy. Null obtained in training set are removed. Engineered features are added to the model using add_as_regressor function.

Model Building: Prophet model with default parameters is used.

Future work: The following I didn’t try.
Hyperparameter Tuning: Didn’t try. It will definitely improve the score. RandomForest,XGB model with same features might perform way better than this I didn’t try.

This is my best submission to the problem. As of final leaderboard, this might have put me in top #1 or in any other case top #10 definitely. I didn’t check the cv scores to choose my final submission and chosen the submission for which i got highest score

in public leaderboard as my final one. It’s a learning for me to always note down local cv scores, and decide final submission based on that. Hope this helps you as well.