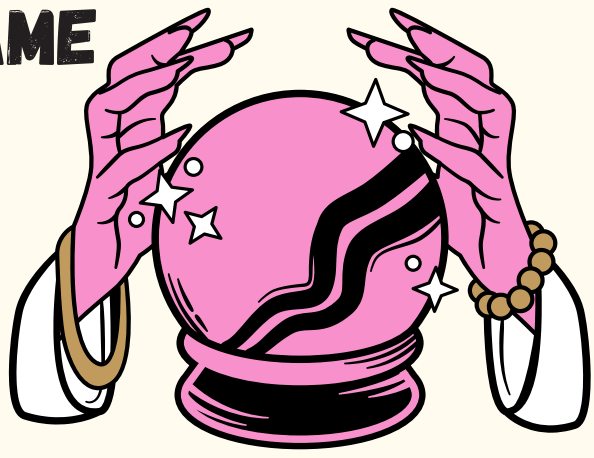
CHALLENGE

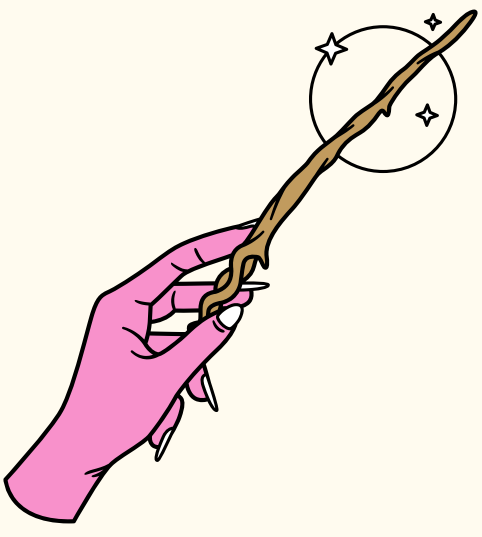
Demand for Shelter

Predicting the future is always difficult. In this interesting case study, we use Facebook Prophet to predict the daily Demand for Shelter in New York City. As well, we will learn about Cross-validation and Parameter Tuning in Time Series

01 PREPARE DATAFRAME

Facebook Prophet has a lot of quirks. The Date variable must be called *ds* and the time-series has to be *y*. Additionally, the date must be in the format yyyy-mm-dd. Finally, don't forget to prepare the events like was shown in the practice tutorial.



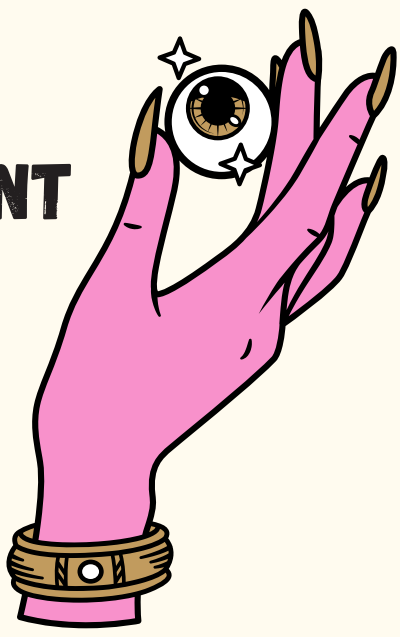


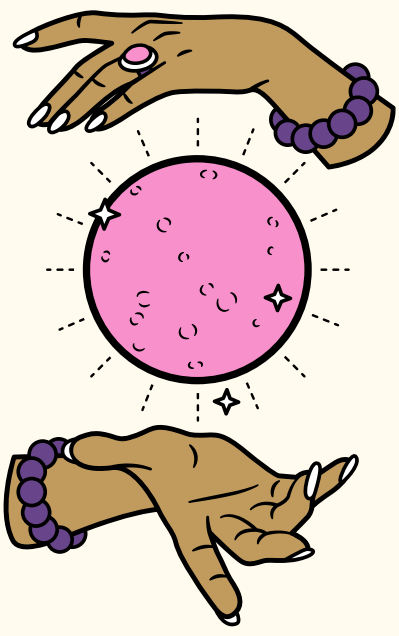
02 TRAINING AND TEST SET

In Time-Series, the training and test set follows a different structure, given that information without context does not have value. Additionally, the test set should have the same number of days as a real-life forecast.

03 PROPHET MODEL AND ACCURACY ASSESSMENT

Build the Facebook Prophet model, while adding the regressors. Next, build the future data frame to perform the forecast. In the end, assess the accuracy of the model.





04 VISUALIZATION

Facebook Prophet has very cool built-in visualization functions. Use them! As a visual learner myself, I like to see pretty graphs to know what the model tells me.

05 PARAMETER TUNING

Do the Parameter Tuning while performing cross-validation. Tune the parameters we tuned in the practice tutorial. Good luck!

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