**Brief approach**

i.- This was clearly a time series problem, so first thing I did is to reduce this problem to a regression problem. In order to reduce it to a Regression, I tried to capture the temporal dynamics of the data like things that affect every object in the data. So I extracted time based features like day of week, week of month, week of year, is the day is weekend, or is it start of the month or end of month because maybe people prefer to go out around payday or on public holidays.

After extracting all these features, I could approach it like simple Machine Learning problem.

ii.- for data preprocessing and feature engineering, first of all I converted “date” column into datetime type column which made it easier to look for other features from it. Then I went on extracting some basic useful features like year, month, day, week, quarter etc. features from date. Given answers to some simple questions like is the day is weekend, or is it start of the month or end of month.

Keeping their data type as integer for easy calculations.

iii.- I have tried some tree based model for this problem like Catboost, XGboost and LightGBM, out of then LightGBM was working best, so I did some parameter tuning and checked the results for best parameter combination.