R&A | DS Task | APMC/Mandi Machine Learning

Aim:

- To understand trends in APMC (Agricultural produce market committee)/mandi price & quantity arrival data for different commodities in Maharashtra.
- To predict the future trends of price for different commodities

Objective:

1. Test and filter outliers.
2. Understand price fluctuations accounting the seasonal effect
    a. Detect seasonality type (multiplicative or additive) for each cluster of APMC and commodities
    b. De-seasonalise prices for each commodity and APMC according to the detected seasonality type
3. Post doing the above analysis, forecast the prices (modal_price) of different commodities for the next three months Make the required assumptions and mention them in the report. Do not worry about high error-rate, focus on the logic and the approach. Hint: Black-box approaches might not yield the best results.

Data: https://drive.google.com/drive/u/0/folders/0B-zoMsiXW40gZlNtNnlINEszRTg

Variable description:

- msprice- Minimum Support Price
- arrivals_in_qtl- Quantity arrival in market (in quintal)
- min_price- Minimum price charged per quintal
- max_price- Maximum price charged per quintal
- modal_price- Mode (Average) price charged per quintal

Submissions:

1. Final output file(s).
2. A brief around the assumptions, methodology, analysis, and final results. Do use graphs and charts to substantiate any result.
3. A brief on approach, tests (what worked and what did not), and assumptions for the prediction.
4. Well commented and modular script(s). (Make smaller functions if required)
5. Code profiling for the prediction section.
6. Visualisations, if any.