**b. .Identify major markets for the district “Agra” and plot price patterns for each of them. What patterns do you identify?**

I Have observed that Achnera major markets for the district , and Fatehpur Sikri , Agra are also major markets for the district. plotted price pattern in python file .The most customer purchased desi item rather than local. .The most market is stated in samsabad for the year 2020(from 1st jan 2020 to 31st dec 2020) as observed and mostly the variety was desi,then local. Potato and other didnt included.

Comment on how you can leverage machine learning to predict prices for a given market in Agra for the crop “Potato”.

**What are the data pre-processing / cleaning techniques you would apply?**

Firstly collecting dataset, and importing required libraries, and importing data set, handling missing values, removing duplicate values, encoding categorical to numerical using one hot encoder, label encoder, visualization of data points handling outlier using univariate, multivariate ,handling null values(or replacing) and checking correlation between the features , and applying Feature scaling concept like standardization and normalization, Splitting dataset into training and test set.

**What are the features you would use to create the model?**

Target variable and dependant variable, correlation between the variable also reducing computation cost, increase performance of the model, reducing error ,checking model over fitting or underfitting and bias or not and and applying hyper parameter tuning to select best parameter for the model and also taking best algorithm.

**How would you frame this problem as a machine learning problem? What would be the target variable?**

I Would frame this as machine learning , price prediction and prediction of prices for the crop Potato in District “Agra” in the state of Uttar Pradesh across year 2020. Based on previous information analyse the future prediction based date, week and year. I would select the model price and places where the potato is been trending (Maximum trade) and the max and min prices comparison.

**Which algorithm would you use for price prediction?**

Decision Tree Regression ,it observe features of an object and train a model in the structure of a tree to predict data in the future to produce meaningful continuous output

**What would be the loss function you would use?**

Mean absolute error

Mean squared error .

R 2 score

**Any other comments you want to add?**

I can choose many algorithm and based performance of the model I can choose best algorithm