Capstone Project Submission

Team Member's Name, Email and Contribution:

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- Data analysis
- Approach towards the plan.
- Feature Engineering
- Model Building
- PPT and Technical documentation.
- Project summary template.
- Data Visualization
- Framework of the project.
- Model building.
- References papers

Problem definition:

There are many things we consider before buying a mobile as we use our mobile for various purposes like connecting with our family & Office Colleagues, playing games, and taking photos to keep our memory alive. So such specifications as RAM, internal memory, Wi-Fi, 3G/4G connectivity, etc. play important role to buy a mobile. To the analysis of this important factor from time to time and come up with the best setoff specifications and price ranges so that people will buy the mobile. Hence through the various ML modules, we will help the company to estimate the price of mobiles according to features so the maximum amount of sell will be possible.

EDA on given Data set:

Digging into data we understand that

1. There is no null and missing value in the data set.

2. There are mainly 21 Features.

3. Dependent variable should be considered as Price Range.

4. There are Factors affecting the dependent variable such as RAM, Battery Power, camera, etc . 5. The heatmap gives a good correlation between the given Feature.

Models used :

- KNN

- Random Forest

- Gradient Boosting Classifier

- XGBClassifier

- Logistic Regression

- Decision Tree Classifier

- Support Vector Machine

- Gridsearch CV

Conclusion:

- RAM in mobile phones is a very important feature for the price range prediction of mobile . as the ram and battery power increase the price range increases.
- According to the user specifications the camera plays the role of attracting the customer. · Customer prefers the longer Battery backup for long-lasting.
- kneighbors classifier is giving the best results for this dataset.
- We build a predictive model, which could help companies estimate the price of mobiles effectively.

Please paste the GitHub Repo link.

Github Link:- https://github.com/SandhyaSah22/Mobile-Price-Range-Prediction.ipynb

Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)