Capstone Project Submission

Instructions:

i) Please fill in all the required information.

ii) Avoid grammatical errors.

Team Member's Name:

Name: **Khushboo Chaurasiya** Email: **Sharmakhushboo771@gmail.com**

Role: -

1) Data Cleaning: -

- Dealing with null values, duplicate data, and outliers present in our data.

2) Exploratory Data Analysis: -

- Extracting the facts from the dataset
- Checking outliers

3) Data Pre-processing & Feature Engineering: -

- Checking for and dealing with multicollinearity present in our dataset.
- Extract the best Features

Name: **Abhishek Jain** Email: **klearpixeloff@gmail.com**

4) Model Implementation: -

- Fitting various models on our data and optimizing them via cross-validation.
- Using these models to make predictions on test and train data.

  The Models implemented are: -

  1. KNN
  2. Decision Tree
  3. Random Forest
  4. Logistic Regression
  5. Naive Bayes
  6. Support Vector Machine

5) Data Visualization: -

- Using several kinds of charts like Line chart, heatmap for confusion matrix, heatmap, boxplot etc to better visualize data and understand correlation and trends.

6) Model performance comparison:-

- Comparison of all implemented models using various Classification evaluation metrics like confusion matrix, F1-score, accuracy score, etc.

7) Conclusion:-

Drawing some insights from the data and the predictions made by our various predictive models on unseen data.

Problem statement:-

There are many things we consider before buying a mobile as we used our mobile for various purpose like connecting with our family & Office Colleagues, playing games, taking a photo's to keep our memory alive. So this such specifications such as RAM, internal memory, Wi-Fi, 3G/4G connectivity etc. plays important role to buy a mobile. To 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 feature so the maximum amount of sell will be possible.

Conclusions: -

- From EDA we can see that mid range and high mid range phones is offer good battery performance and expensive phones and mid range phone offer same specs in terms of front mega pixels camera but high mid range phones offer good front camera
- There are some top features like Ram,battery_power,px_width,px_height, mobile_wt.
- form all the above experiments we can conclude that logistic regression and,KNN,SVM we got the best results

Please paste the GitHub Repo link.
GitHub Link:- https://github.com/Klearpixeloff/Mobile-Price-Range-Prediction https://github.com/Geniuskhushboo/Mobile-Range-Price-Prediction
Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)