Mobile Price Range Prediction

Instructions:

i) Please fill in all the required information.

ii) Avoid grammatical errors.

Team Member's Name, Email and Contribution:
Name: - Vikas Panchal Email id:- panchalvicky501@gmail.com Contribution: 1. Find a project topic. 2. Matches dataset. 3. Research on Models. 4. Create Logistic Regression Model. 5. Create all the model . 6. Analyze the Eda data. 7. Predict price range according to camera and ram. 8. Create a ppt with my team member. Name: - Naveen Kumar Batta Email id: - naveenbatta4587@gmail.com Contribution: 1. Find project resources. 2. Analyze the data. 3. Work in colab Notebook. 4. Predict price according to battery and width, height. 5. Dataset observation. 6. Create a ppt with my team member. 7. Find a problem statement. 8. Find
Please paste the GitHub Repo link.
GitHub Link:- https://github.com/Naveenkumarbatta/mobile-price-range-prediction.git
Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)

Problem statement:

Price is the most effective attribute of marketing and business. The very first question of costumer is about the price of items. All the costumers are first arrived and thinks “If he would be able to purchase something with given specifications or not”. Machine learning provides us best techniques for artificial intelligence like classification, regression, supervised learning, and unsupervised learning and many more Mobile now a days is one of the most selling and purchasing device. Every day new mobiles with new version and more features are launched. Hundreds and thousands of mobiles are sold and purchased on daily basis. So here the mobile price class prediction is a case study for the given type of problem i.e., finding optimal product.

In the competitive mobile-phone market companies want to understand sales data of mobile-phones and factors which drive the prices.

The objective is to find out some relation between features of a mobile phone (eg: - RAM, Internal Memory, etc.) and its selling price. In this problem, we do not have to predict the actual price but a price range indicating how high the price is.

Approaches:

Internet browsing is also one of the most important constraints in this technological era of 21st century. And so is the list of many features based upon those, mobile price is decided. So, we will use many of above-mentioned features to classify whether the mobile would be very low, Medium, and High or very High.

Conclusion:

- From EDA we can see that here are mobile phones in 4 price ranges. The number of elements is almost similar.
- half the devices have Bluetooth, and half don’t
- There is a gradual increase in battery as the price range increases Ram has continuous increase with price range while moving from Low cost to Very high cost.
- costly phones are lighter
- RAM, battery power, pixels played more significant role in deciding the price range of mobile phone.
- form all the above experiments we can conclude that logistic regression , SVM and Hyperparameter tuning for Random Forest we got the best Results.

- This project model could be improved by developing software that could predict by selecting features so that it could be used while launching the new product.