**PRCP-1009-CellphonePrice**

**Problem Statement**

Task 1:-Prepare a complete data analysis report on the given data.

Task 2:-On the basis of the mobile Specification like Battery power, 3G enabled , wifi ,Bluetooth, Ram etc predict the Price range of the mobile.

Task 3:- Prepare the analysis report stating how the model will help expanding the business by stating several factors including feature importance.

**Dataset Link:**

Bob has started his own mobile company. He wants to give a tough fight to big companies like Apple, Samsung etc.

He does not know how to estimate the price of mobiles his company creates. In this competitive mobile phone market, you cannot simply assume things. To solve this problem he collects sales data of mobile phones of various companies.

Bob wants to find out some relation between features of a mobile phone(eg:- RAM, Internal Memory etc) and its selling price. But he is not so good at Machine Learning. So he needs your help to solve this problem.

In this problem you do not have to predict the actual price but a price range indicating how high the price is.

Link: <https://d3ilbtxij3aepc.cloudfront.net/projects/CDS-Capstone-Projects/PRCP-1009-CellphonePrice.zip>

## **File descriptions**

datasets\_11167\_15520\_train.csv

## **Data fields**

* battery\_power - Total energy a battery can store in one time measured in mAh
* blue - Has bluetooth or not
* clock\_speed - speed at which microprocessor executes instructions
* dual\_sim - Has dual sim support or not
* fc - Front Camera mega pixels
* four\_g - Has 4G or not
* int\_memory - Internal Memory in Gigabytes
* m\_dep - Mobile Depth in cm
* mobile\_wt - Weight of mobile phone
* n\_cores - Number of cores of processor
* pc - Primary Camera mega pixels
* px\_height - Pixel Resolution Height
* px\_width - Pixel Resolution Width
* ram - Random Access Memory in Megabytes
* sc\_h - Screen Height of mobile in cm
* sc\_w - Screen Width of mobile in cm
* talk\_time - longest time that a single battery charge will last when you are
* three\_g - Has 3G or not
* touch\_screen - Has touch screen or not
* wifi - Has wifi or not
* price\_range - This is the target variable with value of 0(low cost), 1(medium cost), 2(high cost) and 3(very high cost).

**Model Comparison Report**

Create a report stating the performance of multiple models on this data and suggest the best model for production.

**Report on Challenges faced**

Create a report which should include challenges you faced on data and what technique used with proper reason.

Note:-All above task has to be created on a single jupyter notebook and share the same for the final submission.