

## **Mobile Price Classification Business Case**

The most crucial aspect of promoting a product is its pricing. A smartphone is one of those goods where price is important since it has so many functions that a corporation must consider how to price it in such a way that the features are justified while still covering the marketing and manufacturing expenditures. People constantly updating their cell phones anytime they find new features in a new gadget, making mobile phones the best-selling electronic equipment. Thousands of mobile phones are sold every day, making determining the price of a mobile phone a challenging process for someone who wants to start their own mobile phone business.

In this project, I'm attempting to help a start-up mobile company owner named Bob. He aspires to take on major corporations such as Apple, Samsung, and others. He has no idea how to estimate the cost of the mobile phones his company makes. We can't just assume anything in today's competitive mobile phone market. Bob has collected sales data from multiple brands' mobile phones to solve this problem. Bob is now looking to find correlation between a mobile phone's features (e.g., RAM, Internal Memory, etc.) and its selling price. He is, however, not very good at Machine Learning. As a result, he requires assistance in resolving this issue.

In order to help Bob, I have implemented a Mobile Price Prediction using different Machine Learning Algorithms like Decision tree, K- nearest neighbours and Logistic regression. This project will classify the price range of the mobile price based on the different parameters like camera, touch screen, cores, battery, clock speed, internal memory, battery capacity, etc. The price ranges from 0 (low cost), 1 (medium cost), 2 (high

cost),3 (very high cost). After training the model using 3 algorithms, I will be comparing all the models using the graph.

### **Description of dataset**

#### **train.csv**

- This data contains 21 column and 2000 rows with no null and categorical values which includes 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 Mega Bytes), 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 Wi-Fi or not).

#### **test.csv**

- This data contains 21 column and 1000 rows with no null and categorical values which includes 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 Mega Bytes), 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 Wi-Fi or not).