

# Mobile Price Range Prediction

## Abstract:

There is a new mobile company and the CEO wants to give a tough fight to big companies like Apple, Samsung etc. He has no idea of how to estimate the price of mobiles his company creates. A simple assumption of the prices will not be profitable in this competitive world. To solve this problem he collects sales data of mobile phones of various companies. Thus, the CEO has hired you to find out some relation between features of a mobile phone(eg:- RAM, Internal Memory etc) and its selling price

## Problem Statement:

Predict a price range, indicating how high the price is, using the Naive Bayes algorithm.

## Dataset Information:

Column	Description
battery_power	Total energy a battery can store in one time measured in mAh
clock_speed	The speed at which microprocessor executes instructions
fc	Front Camera megapixels
int_memory	Internal Memory in Gigabytes
m_dep	Mobile Depth in cm
mobile_wt	Weight of the mobile phone
n_cores	Number of cores of a processor
pc	Primary Camera megapixels
px_height	Pixel Resolution Height
px_width	Pixel Resolution Width

## PG Program in Analytics

### Problem Statement – Naïve Bayes

ram	Random Access Memory in MegaBytes
sc_h	Screen Height of mobile in cm
sc_w	Screen Width of mobile in cm
talk_time	The longest time that a single battery charge will last when you are
price_range	This is the target variable with the value of 0(low cost), 1(medium cost), 2(high cost) and 3(very high cost).

#### Scope:

- Prepare and analyse data
- Perform Univariate and Bivariate analysis
- Select important features using Random Forest
- Train Naive Bayes model with data and check it's performance

#### Learning Outcome:

The students will get a better understanding of how the variables are linked to each other and how the EDA approach will help them gain more insights and knowledge about the data that we have and classify the data into similar groups using Naive Bayes. They will also learn about how to choose important features using Random Forest.