# Capstone Project Submission

**Team Member's Name, Email and Contribution:**

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- Data Preprocessing
- Data analysis
- Data Visualization
- Approach towards plan.
- Feature Engineering
- Frame work of project
- Model Building
- PPT presentation
- Technical documentation.
- Project summery template.

**Problem definition:**

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 photos 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.

**EDA on given Data set :**

Digging into data we understand that

1. There is no null and missing value in the data set.

2. There are mainly 21 Features.

3. Dependent variable should be considered as Price Range.

4. There are Factors affecting the dependent variable as RAM , Battery Power, camera etc .

5. The heatmap gives good correlation between the given Feature.

**Models used :**

- KNN
- Random Forest
- Gradient Boosting Classifier
- XGBClassifier
- Logistic Regression
- Decision Tree Classifier
- Support Vector Machine
- Gridsearch CV

**Conclusion :**

- RAM in the mobile phones is very important feature for the price range prediction of mobile . as the ram and battery power increases the price range increases.
- According to the user specifications the camera plays the role to attract the customer .
- Customer prefers the longer Battery backup for long lasting.
- kneighbors classifier is giving the best results for these dataset.
- We build a predictive model, which could help companies to estimate price of mobiles in much effective way.

**Please paste the GitHub Repo link.**

Github Link:- https://github.com/satyam-jyoti-sankar/Mobile_price_range_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)**