Project Summary

# Capstone Project 3

## Mobile Price Range Prediction

## (ML- Classification)

| Details and Contribution:-  Name: Chetan Prakash  Email id: [Cp120794@gmail.com](mailto:Cp120794@gmail.com) |
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* Made the Google Colab notebook with the help of Google Drive data connectivity, data cleaning, data manipulation, and EDA Visualization.
* Development of the business objective and problem statement along with the relevant questionnaire for the business objective.
* Solved all the questions and also created visualization in the Google Colab.
* Do all the feature engineering required to remove multicollinearity.
* Process the data and fit into different-different model.
* Check and compare the outcomes with the help of visualization.
* Created the design and contents of Technical documentation and ensured that everything is covered in the documentation.
* Created the project summary to ensure all the points were covered.

| GitHub Link: <https://github.com/Chetan1207/ML-Classification-Mobile-Price-Range-Prediction.git> |
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| **Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches, and your conclusions. (200-400 words):**  The mobile price range prediction project aims to accurately predict the price range of mobile devices based on various features such as specifications, brand, customer reviews, and other relevant factors. The project involves building and evaluating machine learning models to predict the price range of mobile devices.The project starts with data collection, where relevant data on mobile devices, including features and corresponding price ranges, is gathered. The data is then preprocessed, including handling missing values, feature engineering, and data normalization.  Next, various machine learning algorithms, such as logistic regression, decision trees, random forests, k-nearest neighbors (KNN), and support vector machines (SVM), are trained and evaluated using appropriate evaluation metrics such as accuracy, F1 score, and cross-validation. Hyperparameter tuning may also be applied to optimize the performance of the models.  Once the models are trained and evaluated, the best-performing model(s) are selected based on the evaluation results. The selected model(s) can then be used for making price range predictions for new mobile devices.The project concludes with a summary of the findings, including the accuracy and performance of the selected model(s), and recommendations for leveraging the prediction results for business objectives such as pricing strategy, sales forecasting, market segmentation, competitive analysis, and customer relationship management.  Overall, the mobile price range prediction project aims to provide valuable insights and predictions to support informed decision-making for pricing and marketing strategies in the mobile device industry. |
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