Mobile Phone Pricing

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Title: Mobile Phone Pricing

Description: Nowadays, mobile phones come with many features such as high RAM, powerful processors, good cameras, and large battery capacity. Because of these variations, the price of mobile phones also differs a lot. It becomes difficult for customers and sellers to decide the correct price category of a mobile phone based only on its specifications.

In this project a machine learning model is developed to predict the price range of a mobile phone using its technical features. The dataset contains information such as battery power, RAM, camera quality, screen size, processor cores, and connectivity options like Wi-Fi, Bluetooth, and 4G support.

The data is first analyzed and cleaned, and important patterns are identified using visualizations. After that, different machine

learning algorithms are trained to classify mobile phones into four price categories: low cost, medium cost, high cost, and very high cost. Among the tested models, the Random Forest algorithm gives the best accuracy and performance.

This system helps mobile phone manufacturers, retailers, and customers understand how different features affect mobile phone pricing. It can be used to make better decisions while designing, pricing, or purchasing mobile phones.

Tech Stack:

Programming Language:

- **Python**

Libraries & Frameworks:

- **NumPy – Numerical computations**
- **Pandas – Data manipulation and analysis**
- **Matplotlib – Data visualization**
- **Seaborn – Statistical data visualization**
- **Scikit-learn – Machine learning algorithms and evaluation**

Machine Learning Algorithms:

- **Logistic Regression**
- **Decision Tree Classifier**
- **Random Forest Classifier**

Tools & Platforms:

- **Google Colab – Development and execution environment**

- **Jupyter Notebook**
- **GitHub (optional) – Version control and project hosting**
