Cellphone Company Analysis

Objective

The goal of this Power BI report is to analyze the performance, pricing, and ratings of different cellphone brands and models. The dashboard provides key insights into customer ratings, pricing trends, and demographic influences on cellphone preferences.

Data Preparation and Cleaning

The dataset was cleaned and transformed using **Power Query Editor** in Power BI.
The applied steps included:

1. **Source** – Loaded the dataset into Power BI.
2. **Promoted Headers** – Promoted the first row to column headers for better readability.
3. **Changed Type** – Adjusted data types (e.g., text, numbers, date) to ensure data accuracy.
4. **Added Custom Column** – Created a custom column for derived calculations.
5. **Multiplied Column** – Performed numerical transformations where required.
6. **Changed Type1** – Final data type adjustments to ensure consistency across columns.

Data Modeling and Calculations

Several important metrics were calculated using **DAX (Data Analysis Expressions)** in Power BI:

- **Average Price** = *Average of all cellphone model prices*
- **Average Rating** = *Average of all customer ratings*
- **Number of Unique Brands** = *COUNTROWS(VALUES(Brand))*
- **Number of Unique Models** = *COUNTROWS(VALUES(Model))*

These measures allowed for dynamic aggregations and filtering throughout the dashboard.

Dashboard Overview

The dashboard consists of multiple interactive visuals highlighting key insights:

1. **Summary Cards**
    - Unique Brands: **10**
    - Unique Models: **33**
    - Average Price: **₹62.83K**
    - Average Rating: **6.70**
2. **Average Rating by Brand**
   Displays how different brands perform in terms of customer satisfaction. Apple and Oppo lead with the highest ratings.

3. **Average Rating by Release Year**
   Shows a slight decline in average ratings from 2018 to 2022, indicating possible customer expectations rising over time.

4. **Sum of Ratings by Gender**
   A pie chart illustrating the distribution of ratings between male and female users (approx. 54% female, 46% male).

5. **Average Rating by Occupation**
   Highlights which occupational groups give higher ratings — for instance, Information Administration and Business professionals rate higher than others.

6. **Average Price by Model**
   A horizontal bar chart showing the most expensive models — *Xperia Pro* and *Galaxy Z Fold* rank highest.

7. **Filters and Slicers**
   - **Operating System** (Android/iOS)
   - **RAM** options
   - **Screen Size**, **Selfie Camera**, **Weight**, and **Internal Memory** ranges for dynamic filtering.

Key Insights

- **Apple** has the highest average rating among all brands.
- **Average price** across all models is approximately **₹62.8K**.
- **Ratings have slightly decreased** in recent release years.
- **Female users** gave slightly higher ratings than male users.
- **Premium models** like Xperia Pro and Galaxy Z Fold dominate the price range.

Conclusion

This Power BI dashboard provides a comprehensive view of cellphone market dynamics — combining brand performance, pricing trends, and demographic insights.
By cleaning the dataset in Power BI and using DAX measures for key metrics, the analysis delivers clear, actionable insights for business decision-making and strategic product evaluation.