Laptop Price Dataset - Data Analysis Report

Overview of the Dataset

- Total Entries: 1,146 laptops

- Total Features: 18 columns

- Data Types: Mostly categorical (object) with some numerical (int64 and float64) columns.

Feature Descriptions

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1. Company, Product, TypeName: Brand and type of the laptop.

2. Inches: Screen size (float).

3. ScreenResolution: Describes the resolution and sometimes panel type.

4. Ram: Memory size (string like "8GB").

5. OpSys: Operating System (e.g., Windows 10, macOS, No OS).

6. Cpu Brand, Cpu Model, Cpu Rate: Information about the processor.

7. SSD, HDD, Flash Storage, Hybrid: Different types of storage (in GB).

8. Gpu Brand, Gpu Model: Graphics processing unit details.

9. Price_euros: Target variable - price in Euros (float).

10. price group: Categorical binning of the price (e.g., low, medium, high).

Initial Observations

- No missing values across all columns - the dataset is clean.

- RAM, CPU Rate are stored as strings (e.g., "8GB", "2.5GHz") and will need preprocessing for numerical analysis.

- Multiple storage types (SSD, HDD, Flash, Hybrid) might overlap; need to consider combined total

storage.

- Price ranges are already grouped, useful for classification tasks.

Potential Analysis Directions

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1. Price Trends:

- Analyze how brand, CPU/GPU specs, and storage types affect price.

- Investigate price difference between Notebook, Ultrabook, Gaming laptops.

2. Storage Configuration:

- Impact of SSD-only vs HDD-only vs Hybrid setups on price.

- Average price differences based on total storage capacity.

3. Performance vs Price:

- Correlation between CPU model/frequency and laptop price.

- Influence of GPU brand (Intel, AMD, Nvidia) on cost.

4. Operating System Impact:

- Price comparison across laptops with Windows, Linux, macOS, or No OS.

5. Screen Attributes:

- Effect of screen size and screen resolution on pricing.