📝 Final Report: Laptop Data Cleaning Project

🎯 Objective

The goal of this project was to perform thorough data cleaning on a dataset of laptop specifications to prepare it for further analysis or machine learning tasks.

🧪 Key Steps Taken

1. **Missing Values Handling** 🔍
   - Identified null or missing entries
   - Used imputation or removed incomplete rows where appropriate
2. **Data Type Conversion** 🔄
   - Converted object types (e.g., RAM, weight) to numeric values for analysis
3. **Outlier Detection and Treatment** 📏
   - Detected extreme values using statistical methods
   - Handled outliers by filtering or transformations
4. **Duplicate Removal** 🧹
   - Removed redundant rows to ensure uniqueness
5. **Feature Standardization** 📐
   - Unified naming conventions (e.g., “GB”, “GHz”, processor types)
   - Split composite features into more usable formats
6. **Data Formatting** 📂
   - Cleaned and restructured columns like price, screen size, and brand names

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✅ Final Outcome

- Dataset is cleaned, consistent, and analysis-ready
- All columns have standardized and appropriate formats
- Ready for EDA, visualization, or predictive modeling

🛠️ Tools Used

- Python 🐍
- Pandas 🐼
- Jupyter Notebook 📓

📌 Conclusion

Effective data cleaning is the backbone of any good data science or analytics project. This cleaned laptop dataset is now a reliable base for driving insights or building intelligent models. 🚀

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