



REGRESSION LAPTOP PRICE



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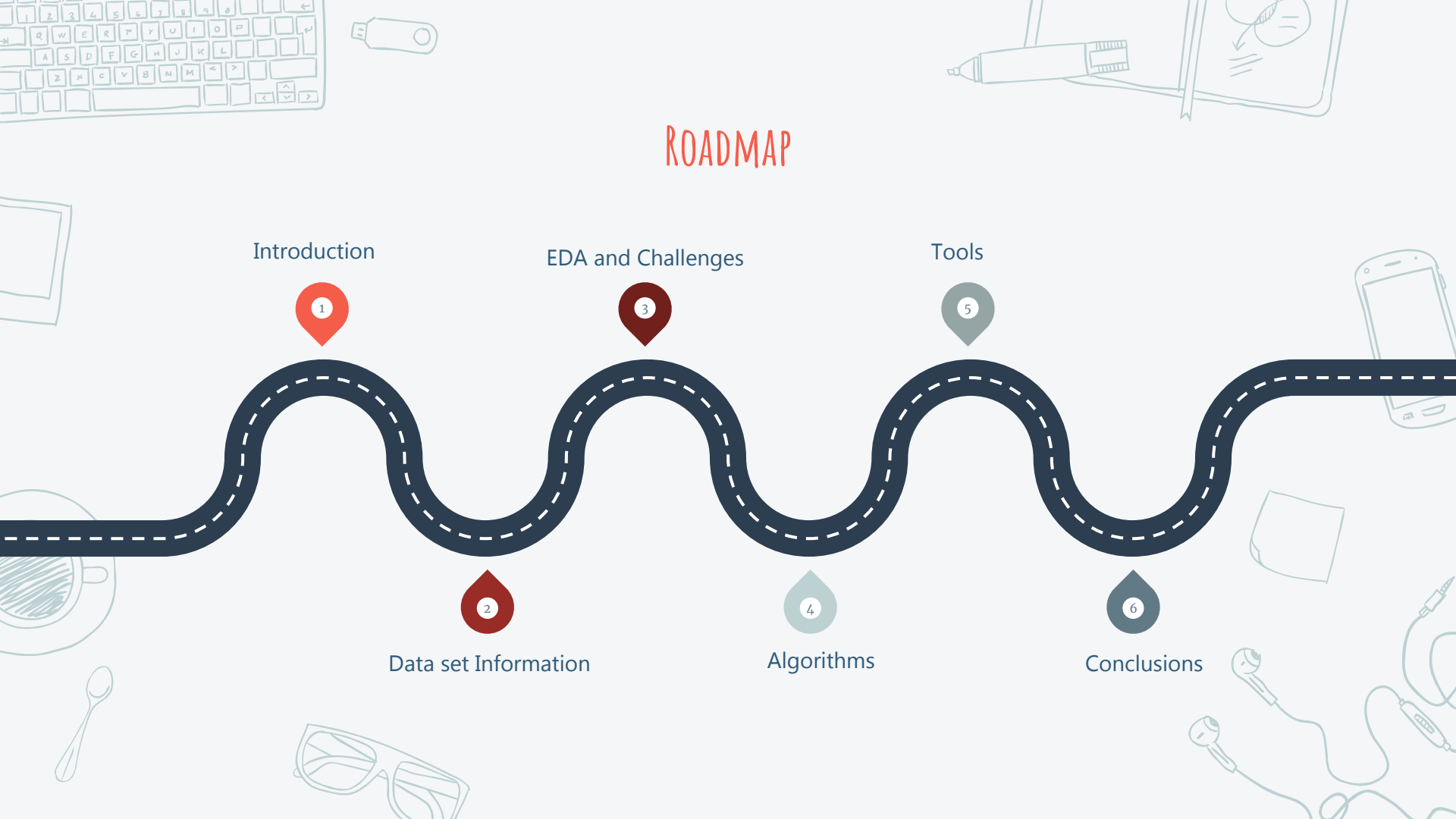
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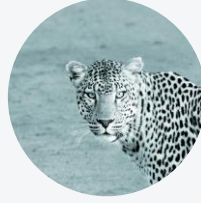
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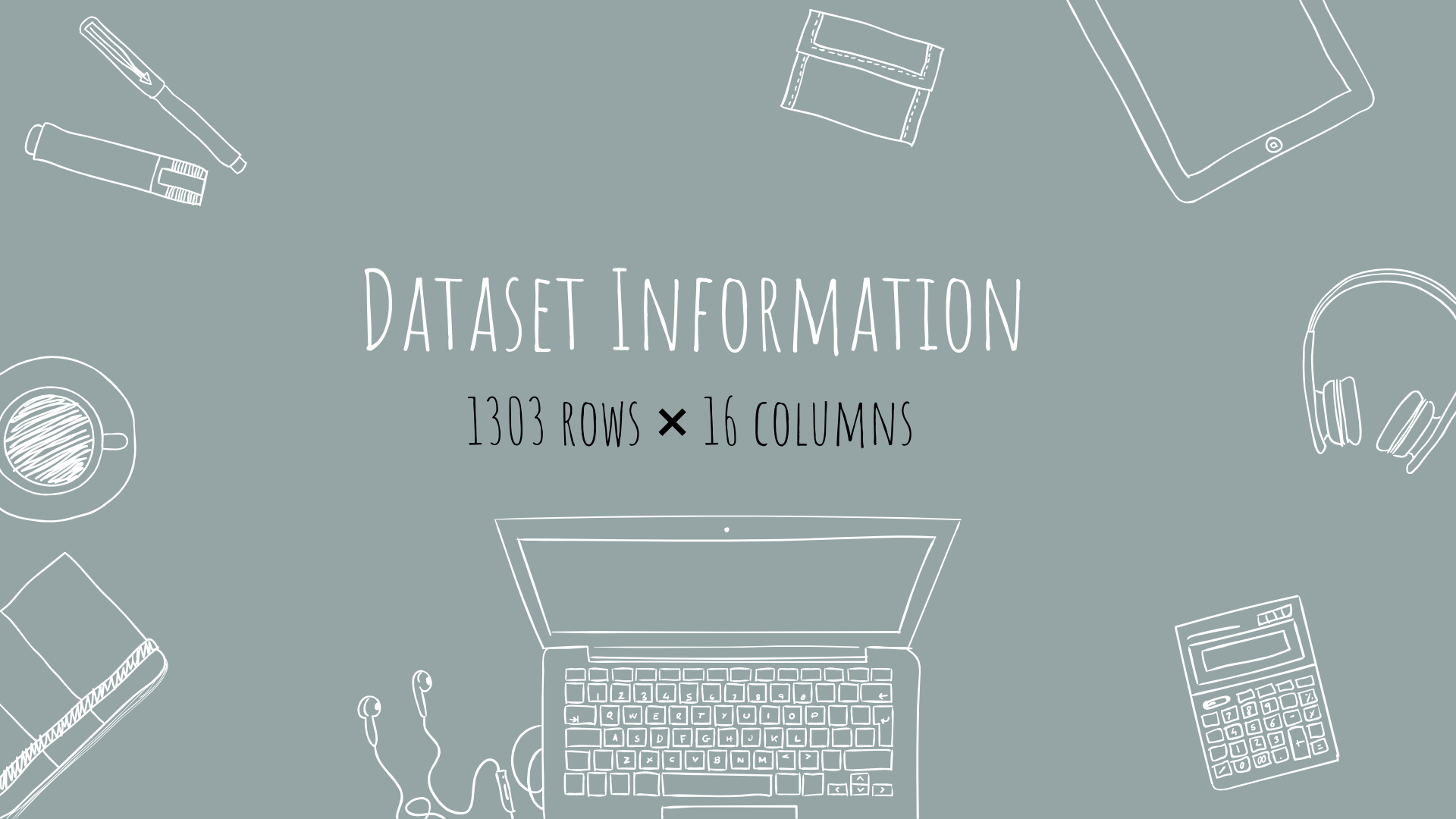


INTRODUCTION

There are many computer companies competing to produce unique laptops that fit the needs of the new generation with all their features and prices. The goal of this project is to identify the features that affect the price by analyzing many types of laptops in many companies and predicting the price of many types.

DATASET INFORMATION

1303 ROWS × 16 COLUMNS



COLUMN

| Column name | Column info | Column type |
|------------------|---|-------------|
| laptop_id | ID | int64 |
| Company | Laptop Manufacturer | object |
| Product | Brand or moder | object |
| TypeName | Type(Notebook,Ultrabook,Gaming,etc.) | object |
| Inches | Screen Size | float64 |
| ScreenResolution | The number of distance pixles in each dimension | object |
| Cpu | Central Processing memory | object |
| Ram | Random access memory | object |
| Memory | Hard disk / SSD memory | object |
| Gpu | Graphic Processing Units | object |
| OpSys | Operating System | object |
| Weight | Laptop Weight | object |
| Price_euros | Laptop Price | float64 |





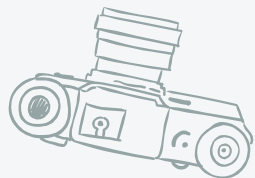
EDA AND CHALLENGES





CHALLENGES

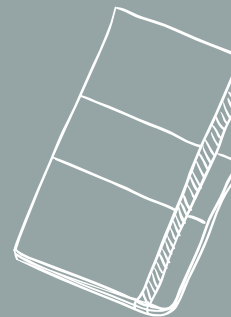
- ✗ Most of the Columns was object
- ✗ We find some nulls and wrong values
- ✗ Split & Change types of columns
- ✗ features engineering to improve results of models



VIEW DATA

[illegible]

QUESTIONS





QUESTIONS

Q1 :What is the average price of laptops per company ?

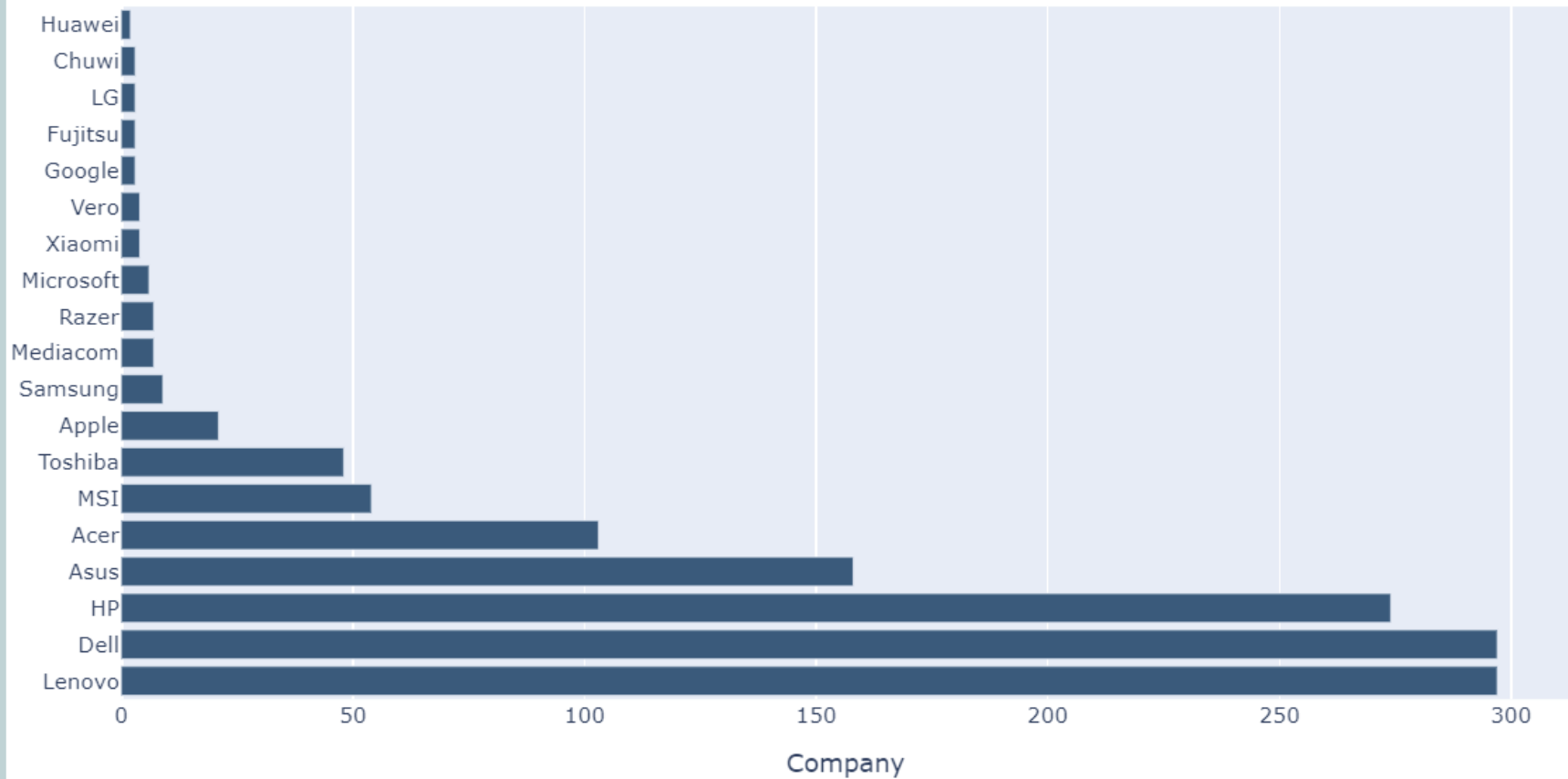
Q2 :What is the minimum weight of laptops for each company ?

Q3 :What is the company of the most expensive laptops ?

Q4 :What is the common hard drive used for every laptop ?

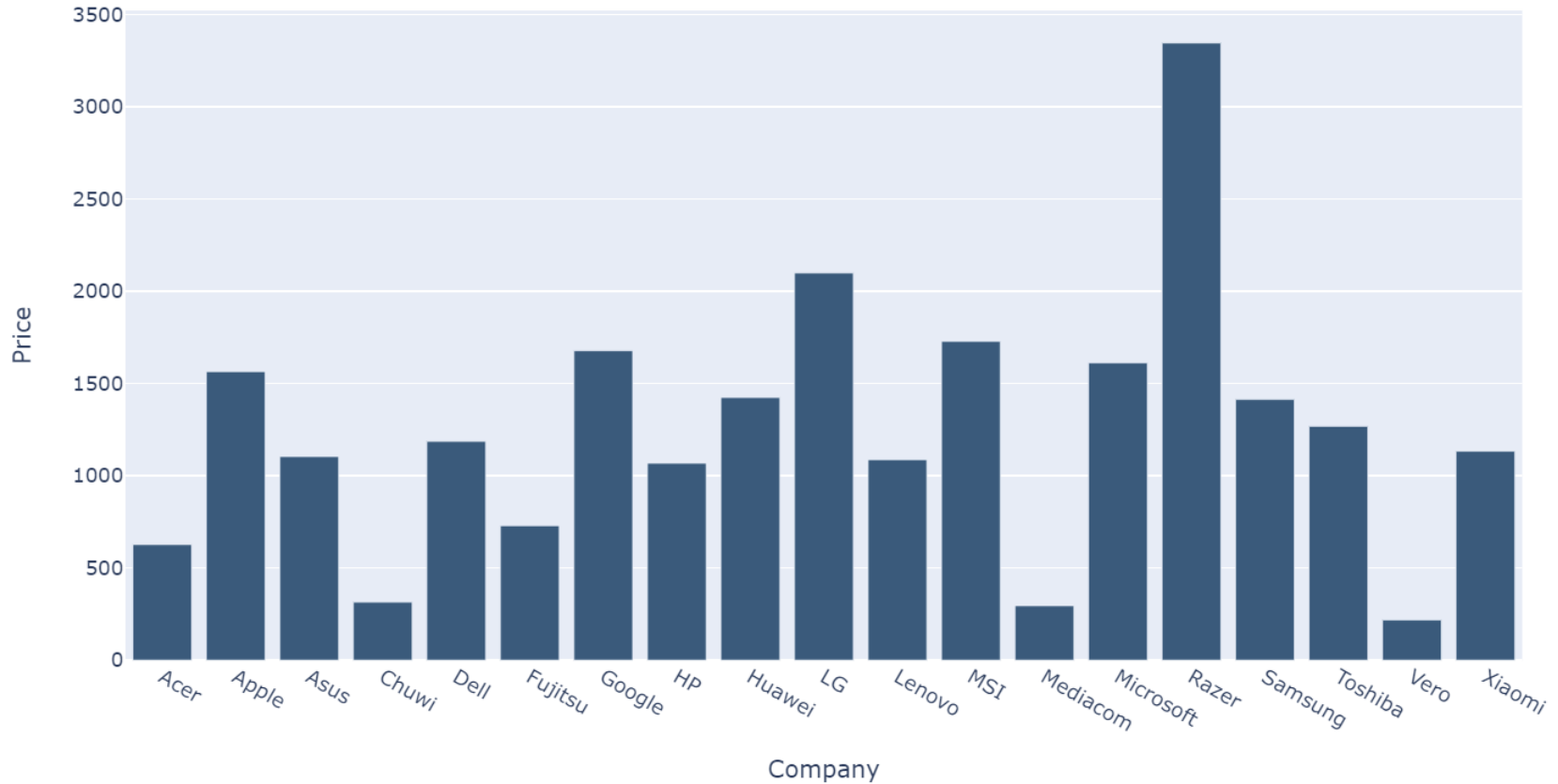
Q5 :Which brand is the most frequent in the dataframe ?

Q1 : Which brand is the most frequent in the data frame ?

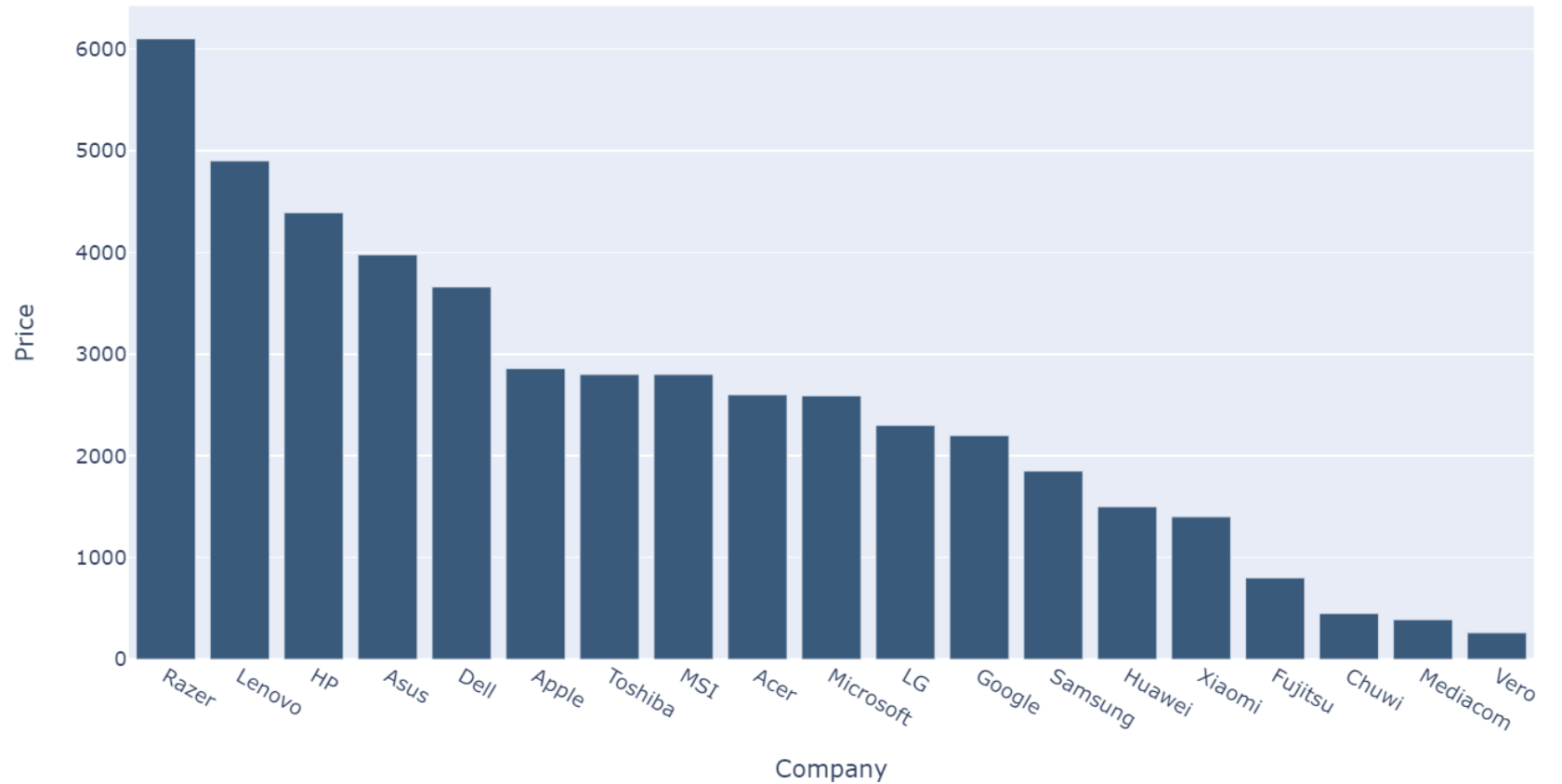


Q2 :What is the average price of laptops per company ?

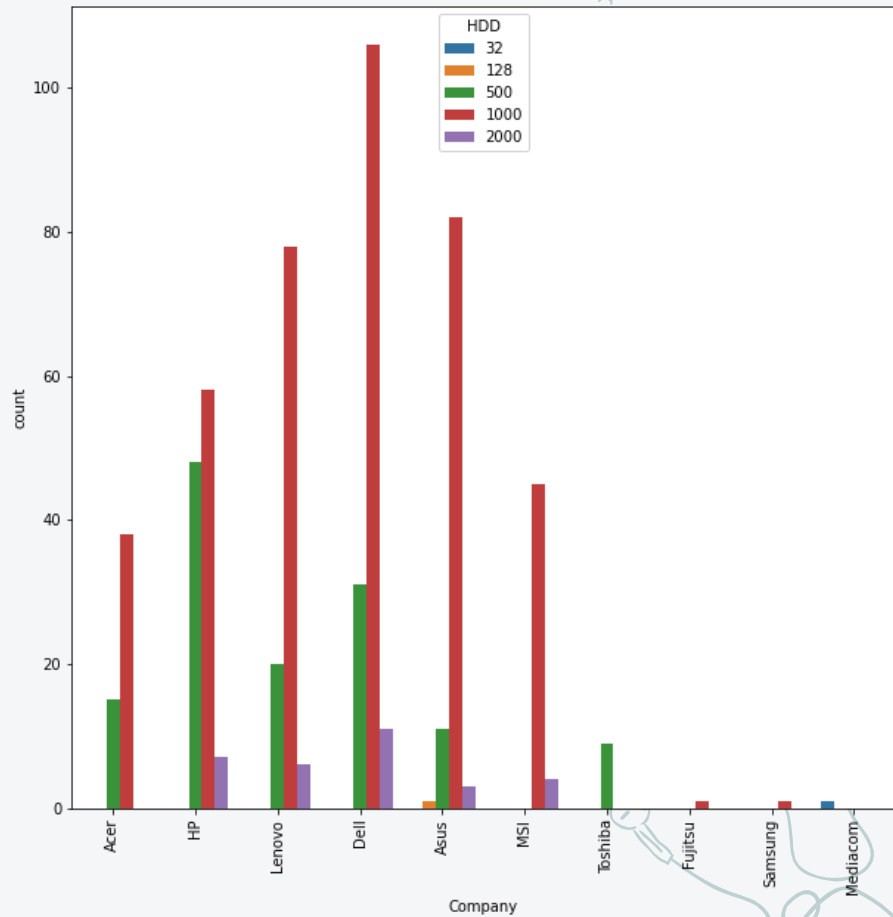
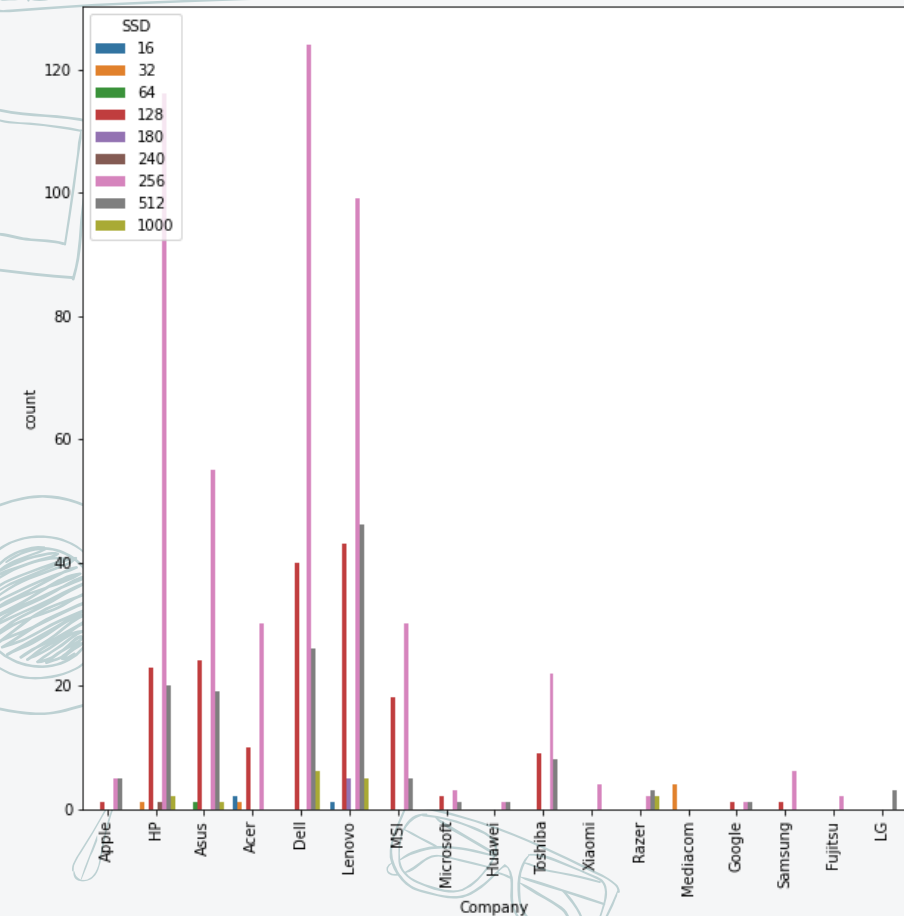
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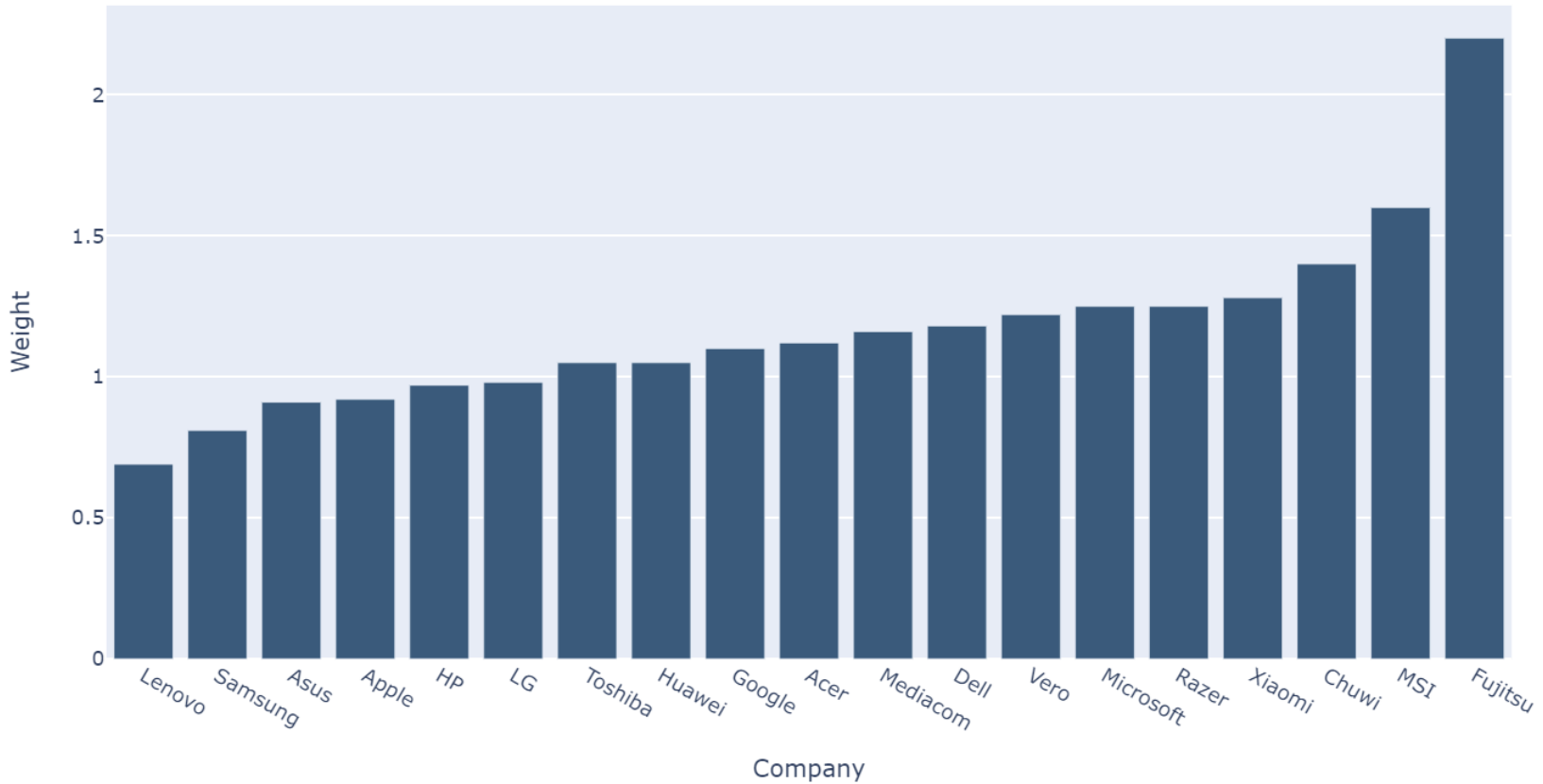
Q3 :What is the company of the most expensive laptops?



Q4 :What is the common hard drive used for every laptop ?



Q5 :What is the minimum weight of laptops for each company ?



ALGORITHMS



1/



ALGORITHMS

| Algorithms | R^2 | |
|--------------------------|------------|------|
| | validation | TEST |
| Linear Regression | 0.83 | 0.82 |
| OLS Regression | 0.93 | 0. |
| Decision Tree Regression | 0.73 | 0.74 |
| Polynomial Regression | 0.80 | 0.77 |

CONCLUSIONS



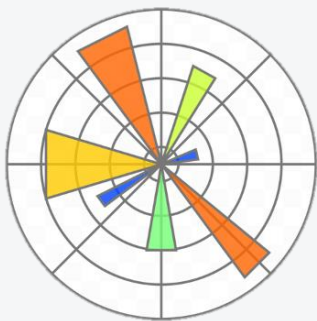
CONCLUSIONS

Companies can now set goals for laptop production or use, for example, browsing and designs for study/work, or games and programmers, with these goals they can set sufficient specifications that maintain the quality and reasonable prices of what they were made for without exaggeration.



TOOLS





THANK YOU!

