

# Project documentation

## Laptop Products

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## Objective

- Identify the most suitable laptop brand by considering both price and customer reviews.



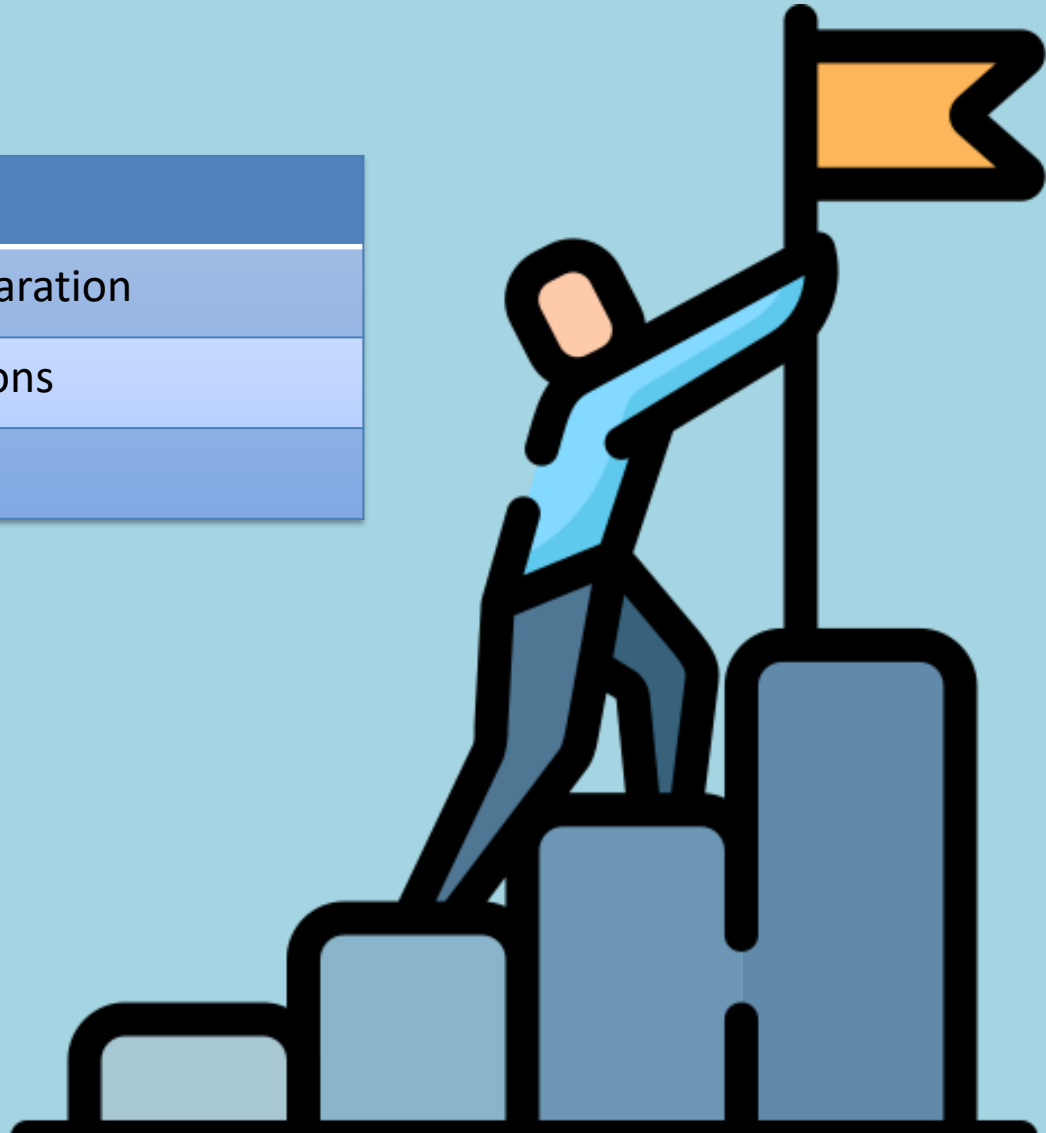
# Agenda

## Data Description

Data Cleaning and Preparation

Analysis and Visualizations

Findings and Insights



# Data Cleaning and Preparation

steps in the data cleaning and preparation phase, which are essential for making the dataset ready for analysis and visualization:

- Remove Duplicates: Ensured each record is unique.
- Find and Replace Values: Corrected inconsistencies in data (e.g "Male" vs "male").
- Categorize Data: Grouped values like income into categories (e.g low, medium, high).

Other important cleaning tasks to focus on:

- Handling Missing Data.
- Converting Data Types.



## Analysis and Visualizations

The final Power BI report contains:

- A **Brand Distribution Bar Chart** showing product availability by brand.
- A **Rating Gauge** that displays the average customer rating.
- A **Price Comparison Bar Chart** highlighting the average prices for each brand.
- A **Summary of Total Reviews** to demonstrate the strength of the data.



# Findings and Insights

## HP

**33 products, 4,151 reviews, 4.41 rating, \$1,000+**  
(Premium, high satisfaction).

## Acer

**25 products, 71,000 reviews, 4.31 rating, \$700–\$800**  
(Affordable, well-rated).

## Lenovo

**19 products, 7,067 reviews, 4.18 rating, \$800–\$900**  
(Balanced pricing & rating).

## Dell

**14 products, 79 reviews, 3.51 rating, ~\$2,000**  
(High-end, lower satisfaction).

## Samsung

**10 products, 7,025 reviews, 4.4 rating, ~\$1,000** (Best rating, mid-range).



## Row Dataset

Bereit  Barrierefreiheit: Keine Probleme    -  + 89%

# Attachment

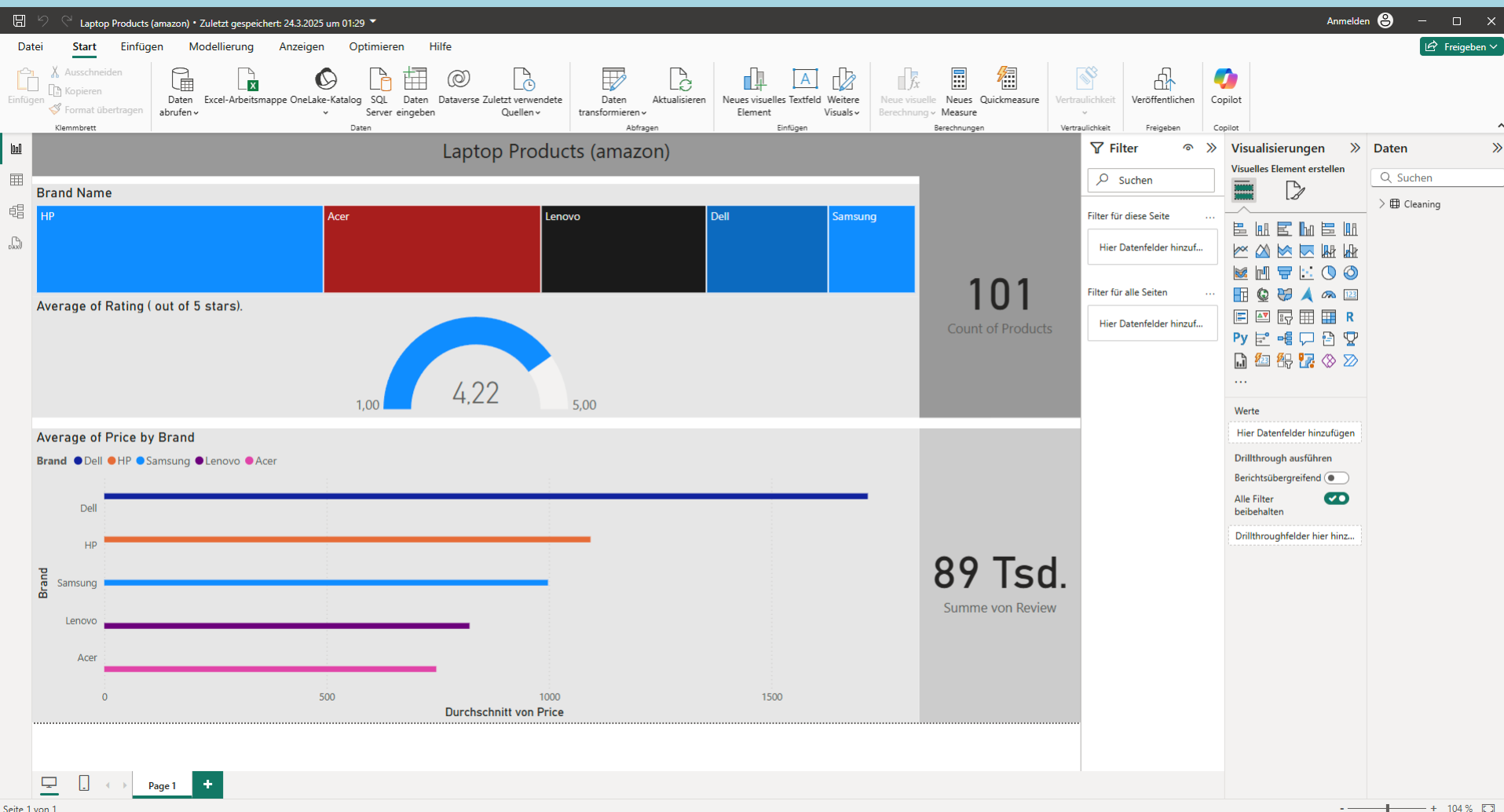
## Data Cleaning and Preparation

Automatisches Speichern  Amazon_laptob_products - Auf "diesem PC" gespeichert										Suchen																					
DateiStartEinfügenSeitenlayoutFormelnDatenÜberprüfenAnsichtHilfe										Kommentare  Freigeben																					
Einfügen  Calibri 11  Textumbruch  Standard  Bedingte Formatierung  Als Tabelle formatieren  Zellenformatvorlagen  Einfügen  Löschen  Format										AutoSumme  Ausfüllen  Löschen  Sortieren und Filtern  Suchen und Auswählen  Add-Ins  Datenanalyse  Copilot																					
Zwischenablage  Schriftart  Ausrichtung  Zahl										Formatvorlagen  Zellen										Bearbeiten											
H3																															
A										B										C											
1 Brand										Description										Price											
2 Acer										Acer Aspire 5 A515-46-R3UB   15.6" Full HD IPS Display   AMD Ryzen 3 3350U Quad-Core Mobile Processor   4GB DDR4   128GB NVMe SSD   WiFi 6   Backlit KB   FPR   Amazon Alexa   Windows 11 Home in S mode										\$ 352											
3 Acer										Acer Chromebook Spin 311 Convertible Laptop   Intel Celeron N4000   11.6" HD Touch Corning Gorilla Glass Display   4GB LPDDR4   64GB eMMC   Intel 802.11ac Gigabit WiFi 5   Chrome OS   CP311-2H-C7QD										\$ 185											
4 Acer										Acer Nitro 5 AN515-58-725A Gaming Laptop   Intel Core i7-12700H   NVIDIA GeForce RTX 3060 GPU   15.6" FHD 144Hz 3ms IPS Display   16GB DDR4   512GB Gen 4 SSD   Killer Wi-Fi 6   RGB Keyboard										\$ 1.449											
5 Acer										Acer Nitro 5 AN515-55-53E5 Gaming Laptop   Intel Core i5-10300H   NVIDIA GeForce RTX 3050 GPU   15.6" FHD 144Hz IPS Display   8GB DDR4   256GB NVMe SSD   Wi-Fi 6   Backlit Keyboard										\$ 775											
6 Samsung										SAMSUNG Galaxy Chromebook 4 11.6€ 64GB Laptop Computer w/ 4GB RAM, Gigabit WiFi, HD Intel Celeron Processor, Compact Design, Military Grade Durability, US Version, Silver										\$ 233											
7 Acer										Acer Aspire 5 A515-56-347N Slim Laptop - 15.6" Full HD IPS Display - 11th Gen Intel i3-1115G4 Dual Core Processor - 8GB DDR4 - 128GB NVMe SSD - WiFi 6 - Amazon Alexa - Windows 11 Home in S Mode										\$ 360											
8 Acer										Acer Predator Helios 300 Gaming Laptop   12th Gen Intel i7-12700H   GeForce RTX 3060 Laptop GPU   17.3" Full HD 144Hz 3ms IPS Display   16GB DDR5   512GB Gen 4 SSD   Killer Wi-Fi 6E   PH317-56-70XU										\$ 1.702											
9 HP										HP 2020 Flagship 14 Chromebook Laptop Computer 14-inch HD SVA Anti-Glare Display Intel Celeron N5000 Processor 4GB DDR4 64GB eMMC WiFi Webcam Chrome OS (Renewed)										\$ 139											
10 Samsung										Samsung Chromebook 4 Chrome OS 11.6" HD Intel Celeron Processor N4000 4GB RAM 32GB eMMC Gigabit Wi-Fi - XE130XBA-K01US										\$ 139											
11 Lenovo										Lenovo 2022 Newest Ideapad 3 Laptop, 15.6" HD Touchscreen, 11th Gen Intel Core i3-1115G4 Processor, 8GB DDR4 RAM, 256GB PCIe NVMe SSD, HDMI, Webcam, Wi-Fi 5, Bluetooth, Windows 11 Home, Almond										\$ 959											
12 Lenovo										Lenovo IdeaPad 1 14 Laptop, 14.0" HD Display, Intel Celeron N4020, 4GB RAM, 64GB Storage, Intel UHD Graphics 600, Win 10 in S Mode, Ice Blue										\$ 251											
13 Lenovo										Lenovo - 2021 - IdeaPad Gaming 3 - Laptop Computer - 15.6" FHD Display -120Hz - AMD Ryzen 5 5600H - 8GB RAM - 256GB Storage - NVIDIA GeForce GTX 1650 - Windows 11 Home										\$ 807											
14 Lenovo										Lenovo IdeaPad 2 Laptop, 14.0" HD Display, Intel Celeron N4020, 4GB RAM, 64GB Storage, Intel UHD Graphics 600, Windows 11 in S Mode, Ice Blue										\$ 215											
15 HP										HP Stream 14inch HD(1366x768) Display, Intel Celeron N4000 Dual-Core Processor, 4GB RAM, 32GB eMMC, HDMI, Wi-Fi, Webcam, Bluetooth, Win10 S, Royal Blue, 14-cb161wm (Renewed)										\$ 438											
16 Acer										Acer 2022 15inch HD IPS Chromebook, Intel Dual-Core Celeron Processor Up to 2.55GHz, 4GB RAM, 32GB Storage, Super-Fast WiFi Up to 1300 Mbps, Chrome OS-(Renewed) (Dale Silver)										\$ 399											
17 Acer										Acer Swift X SFX14-41G-R1S6 Creator Laptop   14" Full HD 100% sRGB   AMD Ryzen 7 5800U   NVIDIA RTX 3050Ti GPU   16GB LPDDR4X   512GB SSD   Wi-Fi 6   Backlit KB   Amazon Alexa   Windows 10 Home										\$ 775											
18 Lenovo										Lenovo - 2022 - IdeaPad Flex 5i - 2-in-1 Chromebook Laptop Computer - Intel Core i3-1115G4 - 13.3" FHD Touch Display - 8GB Memory - 256GB Storage - Chrome OS										\$ 329											
19 Acer										Acer Chromebook 311 Laptop   AMD A-Series Dual-Core A4-9120C   11.6" HD Display   AMD Radeon R4 Graphics   4GB DDR4   64GB eMMC   802.11ac WiFi 5   Bluetooth 4.2   Chrome OS   CB311-10H-42LY										\$ 145											
20 HP										HP 14" Touchscreen Chromebook - Intel Celeron N3350 - 4GB Memory - 32GB eMMC - Wi-Fi & Bluetooth - Webcam - Gray										\$ 247											
21 Acer										Acer Aspire Vero AV15-51-5155 Green PC   15.6" FHD IPS 100% sRGB Display   11th Gen Intel Core i5-1155G7   Intel Iris Xe Graphics   8GB DDR4   256GB SSD   Wi-Fi 6   PCR Materials   Windows 11 Home										\$ 559											
22 Acer										Acer Swift 3 Intel Evo Thin & Light Laptop 14.0" Full HD IPS Intel Core i7-1165G7 Intel Iris Xe Graphics 8GB LPDDR4X 512GB SSD Wi-Fi 6 Fingerprint Reader Back-lit KB SF314-511-7412										\$ 863											
23 Lenovo										Lenovo Chromebook C340 Laptop, 15.6" FHD (1920 X 1080) Display, Intel Core i3-8130U Processor, 4GB DDR4 RAM, 64GB SSD, Intel UHD Graphics 620, Chrome OS, 2 In 1 Touchscreen, 81T90002UX, Mineral Grey										\$ 423											
24 Samsung										Samsung - Plus 2-in-1 12.2" Touch-Screen Chromebook - Intel Celeron - 4GB Memory - 32GB eMMC Flash Memory - Stealth Silver										\$ 359											
25 Samsung										SAMSUNG 13.3€ Galaxy Book2 Pro Laptop Computer, i7 / 8GB / 512GB, 12th Gen Intel Core Processor, Evo Certified, Lightweight, 2022 Model, Graphite										\$ 999											
26 HP										HP 14 Laptop, Intel Celeron N4020, 4 GB RAM, 64 GB Storage, 14-inch, Indigo Blue & Wireless Mouse X3000 G2 (28Y30AA, Black) up to 15-Month Battery,Scroll Wheel										\$ 304											
27 Lenovo										Lenovo IdeaPad 3 Laptop, 14.0" FHD Display, Intel Core i3-1005G1, 4GB RAM, 128GB Storage, Windows 11 S										\$ 374											
28 Lenovo										Lenovo 2022 Newest Ideapad 3 Laptop, 15.6" HD Touchscreen, 11th Gen Intel Core i3-1115G4 Processor, 8GB DDR4 RAM, 256GB PCIe NVMe SSD, HDMI, Webcam, Wi-Fi 5, Bluetooth, Windows 11 Home, Platinum Grey										\$ 365											
29 Samsung										SAMSUNG Electronics Chromebook 4 (2021 Model Without SD Slot) 11.6" Intel UHD Graphics 600, Celeron Processor N4020, 4GB, 32GB, Wi-Fi - Platinum Titan (XE130XBA-KC1US)										\$ 213											
30 Dell										Dell C1422H 14" Full HD LCD Monitor - 16.9 - Silver										\$ 269											
31 Acer										Acer Nitro 5 AN515-55-53E5, Intel i5-10300H, RTX 3050 GPU, 15.6" FHD 144Hz Display, 8GB DDR4, 256GB SSD, Wi-Fi 6 with AOPEN 16PG7QT Pbmiuux 144Hz 15.6-inch FHD (1920 x 1080) Portable IPS Touchscreen										\$ 1.025											
32 Lenovo										Lenovo - Legion Slim 7 - Gaming Laptop - AMD Ryzen 7 5800H - 16GB DDR4 RAM - 2 x 1TB NVMe TLC SSD - NVIDIA GeForce RTX 3060 Max-Q Graphics - 15.6" FHD 165 Hz - Windows										\$ 1.199											
33 HP										HP Stream 11 Pro G5 11.6" HD Laptop, Intel Celeron N4000, 4GB RAM, 64GB eMMC, Intel UHD Graphics 600, Windows 10 Pro										\$ 231											
34 Acer										Acer Chromebook Spin 513 R841LT-S6DJ   13.3" FHD IPS Touch Corning Gorilla Glass Display   Qualcomm Snapdragon 7c Compute Platform   8GB LPDDR4X   128GB eMMC   4G LTE   Wi-Fi 5   Chrome OS										\$ 571											
35 HP										HP OMEN 17.3-in Gaming Laptop Computer i7 16GB 512GB RTX 2060 6GB - 17-cb1070nr - Black										\$ 1.602											
36 Lenovo										Lenovo - Legion 5 - Gaming Laptop - AMD Ryzen 5 5600H - 8GB DDR4 RAM - 512GB NVMe TLC SSD - NVIDIA GeForce RTX 3060 Graphics - 15.6" FHD 120 Hz - Windows 11 Home - Phantom Blue										\$ 899											
37 Lenovo										Lenovo T460s Ultrabook 20F9003CUS (14" Display, Intel i7-6600U 2.6GHz, 8GB RAM, 256GB SSD, Webcam, Backlit Keyboard, Fingerprint Reader, Windows 7 Pro 64)										\$ 1.597											
38 Acer										Acer Chromebook 11 N7 11.6" Traditional Laptop (NX.GM8AA.001,C731-C8VEN)										\$ 269											
39 Lenovo										Lenovo - Legion 5 - Gaming Laptop - 15.6" FHD - AMD Ryzen 5 5600H - 8GB DDR4 RAM - 512GB NVMe TLC SSD - NVIDIA GeForce RTX 3050 Ti Graphics - Windows 11 Home - Phantom Blue										\$ 863											
40 Samsung										SAMSUNG 15.6€ Galaxy Book2 Pro with Intel ARC Laptop Computer, i7 / 32GB / 1TB, 12th Gen Intel Core Processor, Evo Certified, Lightweight, 2022 Model, Graphite										\$ 1.799											
41 Lenovo										Lenovo Flex 5i - 14.0" FHD Touch Display - Intel Core i7-1165G7 - 12GB DDR4 RAM - 512GB M.2 NVMe SSD - Intel Iris Xe Graphics - Windows 11 Home - Graphite Grey										\$ 795											
Amazon_laptob_products										Cleaning																					
Bereit										Barrierefreiheit: Keine Probleme																					



# Attachment

## Analysis and Visualizations



**Thank you for your attention**