

```
In [ ]: ## **ML EDA 3: Amazon Sales**  
## Questions:
```

```
In [1]: import pandas as pd  
import numpy as np  
import matplotlib.pyplot as plt  
import seaborn as sns  
import sklearn  
from sklearn.linear_model import LinearRegression  
from sklearn.model_selection import train_test_split  
from sklearn.metrics import mean_squared_error, r2_score  
import warnings  
warnings.filterwarnings('ignore')  
%matplotlib inline  
  
df = pd.read_csv('amazon.csv')  
df
```

Out[1]:

	product_id	product_name	category
0	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Cha...	Computers&Accessories Accessories&Peripherals ...
1	B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging 1.5...	Computers&Accessories Accessories&Peripherals ...
2	B096MSW6CT	Source Fast Phone Charging Cable & Data Sync U...	Computers&Accessories Accessories&Peripherals ...
3	B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB S...	Computers&Accessories Accessories&Peripherals ...
4	B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	Computers&Accessories Accessories&Peripherals ...
...
1460	B08L7J3T31	Noir Aqua - 5pcs PP Spun Filter + 1 Spanner ...	Home&Kitchen Kitchen&HomeAppliances WaterPurif...
1461	B01M6453MB	Prestige Delight PRWO Electric Rice Cooker (1 ...	Home&Kitchen Kitchen&HomeAppliances SmallKitch...
1462	B009P2LIL4	Bajaj Majesty RX10 2000 Watts Heat Convector R...	Home&Kitchen Heating,Cooling&AirQuality RoomHe...
1463	B00J5DYCCA	Havells Ventil Air DSP 230mm Exhaust Fan (Pist...	Home&Kitchen Heating,Cooling&AirQuality Fans E...
1464	B01486F4G6	Borosil Jumbo 1000-Watt Grill Sandwich Maker (...)	Home&Kitchen Kitchen&HomeAppliances SmallKitch...

1465 rows × 16 columns



In [3]: *# Q1 What is the average rating for each product category?*

```
# Convert 'rating' to numeric
df['rating'] = pd.to_numeric(df['rating'], errors='coerce')

# Group by 'category' and calculate mean rating
avg_rating = df.groupby('category')['rating'].mean()
avg_rating
```

```
Out[3]: category
Car&Motorbike|CarAccessories|InteriorAccessories|AirPurifiers&Ionizers
3.800000
Computers&Accessories|Accessories&Peripherals|Adapters|USBtoUSBAdapters
4.150000
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCHeadsets
3.500000
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCMicropho
nes                                     3.600000
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCSpeakers
4.050000

...
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|GelInkRollerballPens      4.250000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|LiquidInkRollerballPens    4.150000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|RetractableBallpointPens    4.300000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|StickBallpointPens          4.133333
Toys&Games|Arts&Crafts|Drawing&PaintingSupplies|ColouringPens&Markers
4.300000
Name: rating, Length: 211, dtype: float64
```

In [4]: *# Q2 What are the top rating_count products by category?*

```
# Group by 'category' and calculate total rating count
rating_count = df.groupby('category')['rating_count'].sum()
rating_count
```

```
Out[4]: category
Car&Motorbike|CarAccessories|InteriorAccessories|AirPurifiers&Ionizers
1,118
Computers&Accessories|Accessories&Peripherals|Adapters|USBtoUSBAdapters
4,4261,540
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCHeadsets
7,222
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCMicropho
nes
14,9692,804
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCSpeakers
7,3525,195

...
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|GelInkRollerballPens
5,7922,628
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|LiquidInkRollerballPens
6,1991,926
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|RetractableBallpointPens
5,7192,450
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|StickBallpointPens
4,3083,6862,493
Toys&Games|Arts&Crafts|Drawing&PaintingSupplies|ColouringPens&Markers
15,867
Name: rating_count, Length: 211, dtype: object
```

```
In [7]: # Q3 What is the distribution of discounted prices Vs. actual prices?

# Convert 'discounted_price' and 'actual_price' to numeric
df['discounted_price'] = pd.to_numeric(df['discounted_price'], errors='coerce')
df['actual_price'] = pd.to_numeric(df['actual_price'], errors='coerce')

#convert nan to 0
df['discounted_price'] = df['discounted_price'].replace(np.nan, 0)
df['discounted_price'] = df['discounted_price'].fillna(0)
df['actual_price'] = df['actual_price'].fillna(0)

# Calculate the difference between discounted and actual prices
price_diff = df['discounted_price'] - df['actual_price']
price_diff
```

```
Out[7]: 0      0.0
1      0.0
2      0.0
3      0.0
4      0.0
...
1460   0.0
1461   0.0
1462   0.0
1463   0.0
1464   0.0
Length: 1465, dtype: float64
```

```
In [ ]: # Q4 How does the average discount percentage vary across categories?

# Convert 'discount_percentage' to numeric (remove '%' and convert to float)
df['discount_percentage'] = df['discount_percentage'].str.replace('%', '').astype

# Calculate the average discount percentage for each category
```

```
avg_discount = df.groupby('category')['discount_percentage'].mean()
avg_discount
```

```
Out[ ]: category
Car&Motorbike|CarAccessories|InteriorAccessories|AirPurifiers&Ionizers
42.0
Computers&Accessories|Accessories&Peripherals|Adapters|USBtoUSBAdapters
78.5
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCHeadsets
35.0
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCMicropho
nes
56.5
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCSpeakers
46.5

...
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|GelInkRollerballPens
0.0
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|LiquidInkRollerballPens
5.0
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|RetractableBallpointPens
17.5
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|StickBallpointPens
13.0
Toys&Games|Arts&Crafts|Drawing&PaintingSupplies|ColouringPens&Markers
0.0
Name: discount_percentage, Length: 211, dtype: float64
```

```
In [11]: # Q5 What are the most popular product names?

# Count the occurrences of each product name
product_count = df['product_name'].value_counts()
product_count
# Find the top 5 most popular product names and their counts
top_products = product_count.head(5)
top_products
```

```
Out[11]: product_name
Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voi
ce Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution
5
Fire-Boltt Phoenix Smart Watch with Bluetooth Calling 1.3",120+ Sports Modes, 2
40*240 PX High Res with SpO2, Heart Rate Monitoring & IP67 Rating
4
Amazonbasics Nylon Braided Usb-C To Lightning Cable, Fast Charging Mfi Certifie
d Smartphone, Iphone Charger (6-Foot, Dark Grey)
3
Duracell USB Lightning Apple Certified (Mfi) Braided Sync & Charge Cable For Ip
hone, Ipad And Ipod. Fast Charging Lightning Cable, 3.9 Feet (1.2M) - Black
3
Flix Micro Usb Cable For Smartphone (Black)
3
Name: count, dtype: int64
```

```
In [13]: # Q6 What are the most popular product keywords?

# Combine all product names into a single string
all_names = ' '.join(df['product_name'].astype(str))

# Split into words and count occurrences
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```

from collections import Counter
import re

# Remove punctuation and split into words
words = re.findall(r'\b\w+\b', all_names.lower())
keyword_count = Counter(words)

# Show the 10 most common keywords
keyword_count.most_common(10)

```

```

Out[13]: [('with', 752),
          ('for', 674),
          ('black', 530),
          ('usb', 417),
          ('cable', 414),
          ('1', 413),
          ('and', 331),
          ('c', 289),
          ('3', 275),
          ('2', 267)]

```

```

In [15]: # Q7 What are the most popular product reviews?

# Count the occurrences of each review title
review_count = df['review_title'].value_counts()
review_count
# Find the top 5 most popular review titles and their counts
top_reviews = review_count.head(5)
top_reviews

```

```

Out[15]: review_title
Worked on iPhone 7 and didn't work on XR,Good one,Dull Physical Looks,Just Buy
it,Go for it,About the product,Get charging cable at the price,Working well.
10
Satisfied,Charging is really fast,Value for money,Product review,Good quality,G
ood product,Good Product,As of now seems good
8
Phone, camera, heating - works for me, may not for all,Good Mobile,Good but not
excellent under this budget,Worth the price at 9499,Ok type phone... but unable
to make videocall within same service provider.,Phone review,Budget king,Batter
y backup is good      8
A Good Braided Cable for Your Type C Device,Good quality product from ambrane,S
uper cable,As,Good quality,Good product,its good,Good quality for the price but
one issue with my unit
7
Good product,Good one,Nice,Really nice product,Very first time change,Good,Fine
product but could be better,Very nice it's charging like jet
7
Name: count, dtype: int64

```

```

In [19]: # Q8 What is the correlation between discounted_price and rating?

# Convert 'discounted_price' and 'rating' to numeric
df['discounted_price'] = pd.to_numeric(df['discounted_price'], errors='coerce')
df['rating'] = pd.to_numeric(df['rating'], errors='coerce')

#convert nan to 0
df['discounted_price'] = df['discounted_price'].fillna(0)
df['rating'] = df['rating'].fillna(0)

```

```
# Calculate the correlation between discounted_price and rating
correlation = df['discounted_price'].corr(df['rating'])
correlation
```

Out[19]: np.float64(nan)

In [20]: # Q9 What are the top 5 categories based on the highest ratings?

```
# Group by 'category' and calculate average rating
avg_rating = df.groupby('category')['rating'].mean()
avg_rating
```

Out[20]: category
Car&Motorbike|CarAccessories|InteriorAccessories|AirPurifiers&Ionizers
3.800000
Computers&Accessories|Accessories&Peripherals|Adapters|USBtoUSBAdapters
4.150000
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCHeadsets
3.500000
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCMicropho
nes 3.600000
Computers&Accessories|Accessories&Peripherals|Audio&VideoAccessories|PCSpeakers
4.050000

...
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|GelInkRollerballPens 4.250000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|LiquidInkRollerballPens 4.150000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|RetractableBallpointPens 4.300000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplie
s|Pens&Refills|StickBallpointPens 4.133333
Toys&Games|Arts&Crafts|Drawing&PaintingSupplies|ColouringPens&Markers
4.300000
Name: rating, Length: 211, dtype: float64

In [21]: # Q10 Identify any potential areas for improvement or optimization based on the

```
# Based on the data analysis, here are some potential areas for improvement or o

# 1. Categories with low average ratings (from avg_rating) may need product qual
low_rating_categories = avg_rating[avg_rating < 4.0]
print("Categories with low average ratings:\n", low_rating_categories)

# 2. Categories with low average discount percentages (from avg_discount) could
low_discount_categories = avg_discount[avg_discount < 10.0]
print("\nCategories with low average discount percentages:\n", low_discount_cate

# 3. Products with high rating counts but low ratings may indicate popular but u
# Let's find such products:
df['rating'] = pd.to_numeric(df['rating'], errors='coerce')
df['rating_count_num'] = df['rating_count'].replace(',', '', regex=True).astype(
popular_low_rated = df[(df['rating_count_num'] > df['rating_count_num'].quantile(
print("\nPopular products with low ratings:\n", popular_low_rated[['product_name

# 4. If correlation between discounted_price and rating is NaN or very low, disc
print("\nCorrelation between discounted_price and rating:", correlation)
```

```
# 5. Review the most common negative review titles/content (from top_reviews) fo  
print("\nTop review titles for further analysis:\n", top_reviews)
```


Categories with low average ratings:

category	average rating
Car&Motorbike CarAccessories InteriorAccessories AirPurifiers&Ionizers	3.800000
Computers&Accessories Accessories&Peripherals Audio&VideoAccessories PCHeadsets	3.500000
Computers&Accessories Accessories&Peripherals Audio&VideoAccessories PCMicrophones	3.600000
Computers&Accessories Accessories&Peripherals Cables&Accessories Cables SATACables	3.900000
Computers&Accessories Accessories&Peripherals Keyboards,Mice&InputDevices GraphicTablets	3.981818
Computers&Accessories Accessories&Peripherals Keyboards,Mice&InputDevices Keyboard&MiceAccessories DustCovers	3.400000
Computers&Accessories Accessories&Peripherals LaptopAccessories LaptopChargers&PowerSupplies	3.980000
Computers&Accessories Accessories&Peripherals USBGadgets Lamps	3.940000
Computers&Accessories Accessories&Peripherals USBHubs	3.940000
Computers&Accessories Accessories&Peripherals UninterruptedPowerSupplies	3.900000
Computers&Accessories NetworkingDevices DataCards&Dongles	3.800000
Computers&Accessories Printers,Inks&Accessories Printers	3.666667
Computers&Accessories Printers,Inks&Accessories Printers InkjetPrinters	3.600000
Electronics Cameras&Photography Accessories Batteries&Chargers BatteryChargers	3.800000
Electronics Cameras&Photography Flashes Macro&RinglightFlashes	3.800000
Electronics Cameras&Photography VideoCameras	3.700000
Electronics Headphones,Earbuds&Accessories Adapters	3.900000
Electronics Headphones,Earbuds&Accessories Earbuds	3.800000
Electronics Headphones,Earbuds&Accessories Headphones In-Ear	3.898077
Electronics HomeAudio Speakers MultimediaSpeakerSystems	3.900000
Electronics HomeAudio Speakers TowerSpeakers	3.800000
Electronics HomeTheater,TV&Video Accessories 3DGlasses	3.500000
Electronics HomeTheater,TV&Video Accessories RemoteControls	3.800000
Electronics Mobiles&Accessories MobileAccessories AutomobileAccessories Cradles	3.966667
Electronics Mobiles&Accessories MobileAccessories Mounts Bedstand&DeskMounts	3.900000
Electronics Mobiles&Accessories MobileAccessories Photo&VideoAccessories Tripods	3.800000
Electronics Mobiles&Accessories Smartphones&BasicMobiles BasicMobiles	3.911111
Home&Kitchen CraftMaterials Scrapbooking Tape	3.900000
Home&Kitchen Heating,Cooling&AirQuality Fans TableFans	3.950000

```

Home&Kitchen|Heating,Cooling&AirQuality|Humidifiers
3.966667
Home&Kitchen|Heating,Cooling&AirQuality|RoomHeaters
3.900000
Home&Kitchen|Heating,Cooling&AirQuality|RoomHeaters|ElectricHeaters
3.890000
Home&Kitchen|Heating,Cooling&AirQuality|RoomHeaters|FanHeaters
3.810000
Home&Kitchen|Heating,Cooling&AirQuality|RoomHeaters|HalogenHeaters
3.600000
Home&Kitchen|Heating,Cooling&AirQuality|RoomHeaters|HeatConvector
3.700000
Home&Kitchen|HomeStorage&Organization|LaundryOrganization|LaundryBaskets
3.992308
Home&Kitchen|Kitchen&HomeAppliances|Coffee,Tea&Espresso|CoffeeGrinders|ElectricGr
inders
3.300000
Home&Kitchen|Kitchen&HomeAppliances|Coffee,Tea&Espresso|EspressoMachines
3.900000
Home&Kitchen|Kitchen&HomeAppliances|Coffee,Tea&Espresso|MilkFrothers
3.733333
Home&Kitchen|Kitchen&HomeAppliances|SewingMachines&Accessories|Sewing&EmbroideryM
achines
3.650000
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|JuicerMixerGrinders
3.891667
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|Juicers
3.700000
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|Kettles&HotWaterDispen
sers|Kettle&ToasterSets
3.961538
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|Mills&Grinders|WetGrin
ders
3.800000
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|Rice&PastaCookers
3.960000
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|VacuumSealers
3.671429
Home&Kitchen|Kitchen&HomeAppliances|Vacuum,Cleaning&Ironing|Vacuums&FloorCare|Vac
uums|HandheldVacuums
3.450000
Home&Kitchen|Kitchen&HomeAppliances|WaterPurifiers&Accessories|WaterPurifierAcces
sories
3.918182
MusicalInstruments|Microphones|Condenser
3.900000
Name: rating, dtype: float64

```

Categories with low average discount percentages:

```

category
Electronics|Cameras&Photography|Accessories|Film
0.000000
Electronics|HomeAudio|MediaStreamingDevices|StreamingClients
0.000000
Home&Kitchen|CraftMaterials|DrawingMaterials|DrawingMedia|Pencils|WoodenPencils
0.000000
Home&Kitchen|CraftMaterials|PaintingMaterials
0.000000
Home&Kitchen|CraftMaterials|PaintingMaterials|Paints
9.333333
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|OvenToasterGrills
9.500000
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|SmallApplianceParts&Ac
cessories
8.000000
Home&Kitchen|Kitchen&HomeAppliances|SmallKitchenAppliances|SmallApplianceParts&Ac
cessories|StandMixerAccessories
0.000000

```

```

Home&Kitchen|Kitchen&HomeAppliances|WaterPurifiers&Accessories|WaterCartridges
3.000000
OfficeProducts|OfficeElectronics|Calculators|Basic
0.000000
OfficeProducts|OfficeElectronics|Calculators|Financial&Business
0.000000
OfficeProducts|OfficeElectronics|Calculators|Scientific
2.500000
OfficeProducts|OfficePaperProducts|Paper|Copy&PrintingPaper|ColouredPaper
0.000000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Notebooks,WritingPads&Diaries
|WireboundNotebooks 5.750000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplies|
Pens&Refills|BottledInk 5.000000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplies|
Pens&Refills|FountainPens 0.000000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplies|
Pens&Refills|GelInkRollerballPens 0.000000
OfficeProducts|OfficePaperProducts|Paper|Stationery|Pens,Pencils&WritingSupplies|
Pens&Refills|LiquidInkRollerballPens 5.000000
Toys&Games|Arts&Crafts|Drawing&PaintingSupplies|ColouringPens&Markers
0.000000
Name: discount_percentage, dtype: float64

```

Popular products with low ratings:

	product_name \
5	pTron Solero TB301 3A Type-C Data and Fast Cha...
35	pTron Solero MB301 3A Micro USB Data & Chargin...
109	PTron Solero T241 2.4A Type-C Data & Charging ...
336	boAt Wave Call Smart Watch, Smart Talk with Ad...
346	boAt Wave Lite Smartwatch with 1.69" HD Displa...
349	PTron Tangentbeat in-Ear Bluetooth 5.0 Wireles...
357	ELV Car Mount Adjustable Car Phone Holder Univ...
387	Redmi Note 11 Pro + 5G (Stealth Black, 6GB RAM...
391	boAt Wave Call Smart Watch, Smart Talk with Ad...
403	pTron Solero TB301 3A Type-C Data and Fast Cha...
408	PTron Boom Ultima 4D Dual Driver, in-Ear Gamin...
415	PTron Tangent Lite Bluetooth 5.0 Earphones wit...
421	boAt Wave Call Smart Watch, Smart Talk with Ad...
429	Redmi Note 11 Pro + 5G (Phantom White, 8GB RAM...
436	Redmi Note 11 Pro + 5G (Stealth Black, 8GB RAM...
457	boAt Wave Lite Smartwatch with 1.69" HD Displa...
458	boAt Wave Call Smart Watch, Smart Talk with Ad...
496	boAt Wave Lite Smartwatch with 1.69 Inches(4.2...
514	pTron Solero MB301 3A Micro USB Data & Chargin...
585	boAt Airdopes 141 Bluetooth Truly Wireless in ...
587	boAt Wave Call Smart Watch, Smart Talk with Ad...
591	boAt Airdopes 121v2 in-Ear True Wireless Earbu...
597	ZEBRONICS Zeb-Bro in Ear Wired Earphones with ...
600	boAt Wave Lite Smartwatch with 1.69" HD Displa...
601	JBL C50HI, Wired in Ear Headphones with Mic, O...
609	Boult Audio BassBuds X1 in-Ear Wired Earphones...
640	DIGITEK® (DTR 260 GT) Gorilla Tripod/Mini 33 c...
642	pTron Solero TB301 3A Type-C Data and Fast Cha...
649	Boult Audio AirBass PowerBuds with Inbuilt Pow...
656	Boult Audio Probass Curve Bluetooth Wireless i...
667	Zebronics ZEB-KM2100 Multimedia USB Keyboard C...
680	ZEBRONICS Zeb-Thunder Bluetooth Wireless Over ...
712	Zebronics ZEB-COUNTY 3W Wireless Bluetooth Por...
715	Zebronics Wired Keyboard and Mouse Combo with ...

716 JBL Tune 215BT, 16 Hrs Playtime with Quick Cha...
 720 boAt Airdopes 171 in Ear Bluetooth True Wirele...
 780 Boulton Audio Truebuds with 30H Playtime, IPX7 W...
 800 MAONO AU-400 Lavalier Auxiliary Omnidirectiona...
 847 ENVIE ECR-20 Charger for AA & AAA Rechargeable...
 873 HP Deskjet 2331 Colour Printer, Scanner and Co...
 1022 Pigeon by Stovekraft Amaze Plus Electric Kettl...
 1027 Glun Multipurpose Portable Electronic Digital ...
 1029 Prestige 1.5 Litre Kettle 1500-watts, Red
 1031 Prestige Electric Kettle PKOSS - 1500watts, St...
 1032 Pigeon by Stovekraft Cruise 1800 watt Inductio...
 1045 Lifelong LLMG23 Power Pro 500-Watt Mixer Grind...
 1068 Butterfly Jet Elite Mixer Grinder, 750W, 4 Jar...
 1098 Eureka Forbes Trendy Zip 1000 Watts powerful s...
 1099 Pigeon by Stovekraft Quartz Electric Kettle (1...
 1130 Prestige Iris 750 Watt Mixer Grinder with 3 St...
 1210 Aquasure From Aquaguard Amaze RO+UV+MTDS, 7L st...

	category	rating	rating_count
5	Computers&Accessories Accessories&Peripherals ...	3.9	24,871
35	Computers&Accessories Accessories&Peripherals ...	3.9	24,871
109	Computers&Accessories Accessories&Peripherals ...	3.9	24,871
336	Electronics WearableTechnology SmartWatches	3.8	17,831
346	Electronics WearableTechnology SmartWatches	3.9	21,796
349	Electronics Headphones,Earbuds&Accessories Hea...	3.9	58,162
357	Electronics Mobiles&Accessories MobileAccessor...	3.9	46,399
387	Electronics Mobiles&Accessories Smartphones&Ba...	3.9	25,824
391	Electronics WearableTechnology SmartWatches	3.8	17,831
403	Computers&Accessories Accessories&Peripherals ...	3.9	24,870
408	Electronics Headphones,Earbuds&Accessories Hea...	3.6	18,202
415	Electronics Headphones,Earbuds&Accessories Hea...	3.5	83,996
421	Electronics WearableTechnology SmartWatches	3.8	17,831
429	Electronics Mobiles&Accessories Smartphones&Ba...	3.9	25,824
436	Electronics Mobiles&Accessories Smartphones&Ba...	3.9	25,824
457	Electronics WearableTechnology SmartWatches	3.9	21,796
458	Electronics WearableTechnology SmartWatches	3.8	17,833
496	Electronics WearableTechnology SmartWatches	3.9	21,796
514	Computers&Accessories Accessories&Peripherals ...	3.9	24,870
585	Electronics Headphones,Earbuds&Accessories Hea...	3.9	1,36,954
587	Electronics WearableTechnology SmartWatches	3.8	17,833
591	Electronics Headphones,Earbuds&Accessories Hea...	3.8	1,80,998
597	Electronics Headphones,Earbuds&Accessories Hea...	3.5	21,764
600	Electronics WearableTechnology SmartWatches	3.9	21,797
601	Electronics Headphones,Earbuds&Accessories Hea...	3.9	92,995
609	Electronics Headphones,Earbuds&Accessories Hea...	3.9	77,027
640	Electronics Cameras&Photography Accessories Tr...	3.9	21,372
642	Computers&Accessories Accessories&Peripherals ...	3.9	24,870
649	Electronics Headphones,Earbuds&Accessories Hea...	3.7	28,324
656	Electronics Headphones,Earbuds&Accessories Hea...	3.8	1,03,052
667	Computers&Accessories Accessories&Peripherals ...	3.6	33,735
680	Electronics Headphones,Earbuds&Accessories Hea...	3.8	60,026
712	Electronics HomeAudio Speakers BluetoothSpeakers	3.9	64,705
715	Computers&Accessories Accessories&Peripherals ...	3.9	17,348
716	Electronics Headphones,Earbuds&Accessories Hea...	3.7	87,798
720	Electronics Headphones,Earbuds&Accessories Hea...	3.9	47,521
780	Electronics Headphones,Earbuds&Accessories Hea...	3.6	25,910
800	MusicalInstruments Microphones Condenser	3.8	20,218
847	Electronics Cameras&Photography Accessories Ba...	3.8	40,895
873	Computers&Accessories Printers,Inks&Accessorie...	3.5	21,762
1022	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.9	1,23,365

1027	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.9	44,994
1029	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.9	31,783
1031	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.9	63,350
1032	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.8	54,032
1045	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.8	44,050
1068	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.9	25,340
1098	Home&Kitchen Kitchen&HomeAppliances Vacuum,Cle...	3.9	32,931
1099	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.9	17,424
1130	Home&Kitchen Kitchen&HomeAppliances SmallKitch...	3.9	43,070
1210	Home&Kitchen Kitchen&HomeAppliances WaterPurif...	3.9	18,497

Correlation between discounted_price and rating: nan

Top review titles for further analysis:

review_title

Worked on iPhone 7 and didn't work on XR,Good one,Dull Physical Looks,Just Buy it,Go for it>About the product,Get charging cable at the price,Working well.

10

Satisfied,Charging is really fast,Value for money,Product review,Good quality,Good product,Good Product,As of now seems good

8

Phone, camera, heating - works for me, may not for all,Good Mobile,Good but not excellent under this budget,Worth the price at 9499,Ok type phone... but unable to make videocall within same service provider.,Phone review,Budget king,Battery backup is good

8

A Good Braided Cable for Your Type C Device,Good quality product from ambrane,Super cable,As,Good quality,Good product,its good,Good quality for the price but one issue with my unit

7

Good product,Good one,Nice,Really nice product,Very first time change,Good,Fine product but could be better,Very nice it's charging like jet

7

Name: count, dtype: int64

In []: