

AMAZON CHALLENGE

Michael Du



1-16 of over 50,000 results for "hdmi usb cable"

☐ prime | FREE One-Day

PAGE PLACEMENT MATTERS

Computers & Accessories

- Computer Cables & Interconnects
- DVI-HDMI Adapters
- USB Cables
- Thunderbolt Cables
- USB-to-VGA Adapters
- KVM Switches
- Computer Cable Adapters

Electronics

HDMI Cables



Sponsored ⓘ

USB-C to HDMI, CableCreation
Thunderbolt 3 compatible, DP /
by CableCreation

\$11⁹⁹ prime

Get it by **Saturday, Feb 3**

DIGITAL

Why It's So Hard for Brands to Get Noticed on Amazon

Brands have a love-hate relationship with Amazon. But exclusive new research

During September, 75 million consumers searched for something at the online retailer, but only 30 percent clicked past the first page of search results.

That's at least more than the 20 percent of shoppers who said they would consider looking at the second page of search results. Only 12.6 percent of shoppers said that they would look at the third page of results, and less than 10

results. They're likely to click on what they see, and if they don't see your brand

\$13.46 (1 used offer)



USB-C to HDMI CableCreation Type C(Thunderbolt 3 Compatible)to HDMI 4K Hub Adapter (DP Alt Mode), Male to Female, for Macbook(Pro)/Chromebook Pixel/Dell XPS 13/Yoqa 910/Samsung S8/S8+, White by CableCreation

\$999 prime | FREE Same-Day

Get it by **TODAY, Feb 2**

FREE Same-Day Delivery on qualifying orders over \$35

★★★★☆ · 406

Product Features

... This USB-C to HDMI adapter compatible with: (iMac 2017) / (MacBook Pro ...



USB C Hub, Type C Hub to HDMI, 4 in 1 Combo with 2USB3.0 and PD, Multi-function USB C to HDMI Adapter for Notebook & Tablet PC & Phone --- MacBook Pro, Chromebook 2016, DELL XP etc. by RayCue

\$3099

prime

More options available:

\$30.99 **Other Sellers**

★★★★★ · 34

Save \$2.00 with coupon

Product Features

... Function: USB C HUB- USB-C / M Hub to HDMI / F + 2 x USB3.0A / F ...



Cable Matters USB-C to HDMI Cable Supporting 4K 60Hz in Black 6 Feet (Thunderbolt 3 Port Compatible) For 2016/2017 Macbook Pro, Dell XPS 13/15, Lenovo Yoqa 910, Surface Book 2 and More by Cable Matters

\$1599 prime | FREE Same-Day

Get it by **TODAY, Feb 2**

FREE Same-Day Delivery on qualifying orders over \$35

★★★★★ · 34

Product Features

... RESOLUTION SUPPORT with this USB C to HDMI cable and compatible ...



USB-C to HDMI Hub Adapter, ARKTEK 3-in-1 USB Type C to HDMI 4K USB 3.0 Converter Charging Adapter for New MacBook with USB-C Port Chromebook Pixel Samsung Note 8 and more (Aluminum Case, Silver) by ARKTEK

\$1899 prime

Get it by **Tomorrow, Feb 3**

More Buying Choices

\$18.99 (2 new offers)

★★★★☆ · 103

Product Features

... Supports USB-C to HDMI converting, up to 4K UHD resolution (3840x2160 ...



USB C to HDMI Cable, RayCue USB 3.1 Type C Male (Thunderbolt 3 Compatible) to HDMI Male Cable for 2016 MacBook Pro, 2015 MacBook, ChromeBook Pixel, Samsung Galaxy S8 / S8 Plus, Iq q5 etc by RayCue

\$799 prime

Get it by **Tomorrow, Feb 3**

★★★★☆ · 54

Product Features

In the box: 1* USB C to HDMI Cable(Size: 6.6ft/2.0m)



USB C to HDMI Adapter, CHOETECH (4K@60Hz) USB 3.1 Type C to HDMI Adapter (Thunderbolt 3 Port Compatible) for 2017/ 2016 MacBook Pro, 2016/2015 MacBook, Samsung Galaxy Note 8 / S8 / S8 Plus etc by CHOETECH

\$1799 prime | FREE Same-Day
Get it by **TODAY, Feb 2**
FREE Same-Day Delivery on qualifying orders over \$35

★★★★☆ · 128

Product Features
... 1*Super Portable CHOETECH USB C to HDMI Adapter, 18-month Warranty ...

PHIZLI



USB- C to HDMI VGA Adapter,Phizli 2 in 1 USB 3.1 Type C to VGA HDMI 4K UHD Converter Adaptor Dual screen display with Aluminium Case for 2017/2016 MacBook/ChromeBook Pixel; by Phizli

\$2499 prime | FREE Same-Day
Get it by **TODAY, Feb 2**
FREE Same-Day Delivery on qualifying orders over \$35

★★★★☆ · 111

Save 5% (with coupon)

Product Features
... USB C to HDMI or USB C to VGA. Dock any laptop with a USB C Type Port ...



Samsung USB-C to HDMI Adapter, Black by Samsung

\$3199 prime | FREE Same-Day
Get it by **TODAY, Feb 2**
FREE Same-Day Delivery on qualifying orders over \$35

★★★★☆ · 148

Product Features
... Supports up to UHD and 4K televisions Uses HDMI 2.0 and Display Port 1. ...



nonda USB-C to HDMI Adapter 4K@60Hz UHD, Foldable USB 3.1 Type C(Thunderbolt 3) to HDMI Dongle for 2017/2016 Macbook Pro, 2016/2015 MacBook, Samsung Galaxy Note S8 by nonda

\$2299 prime
Get it by **Tomorrow, Feb 3**

★★★★☆ · 1,824

More Buying Choices
\$22.99 (2 new offers)

Product Features
... Dell XPS 15, etc. USB 3.1 Type C(Thunderbolt 3) to HDMI converter. ...

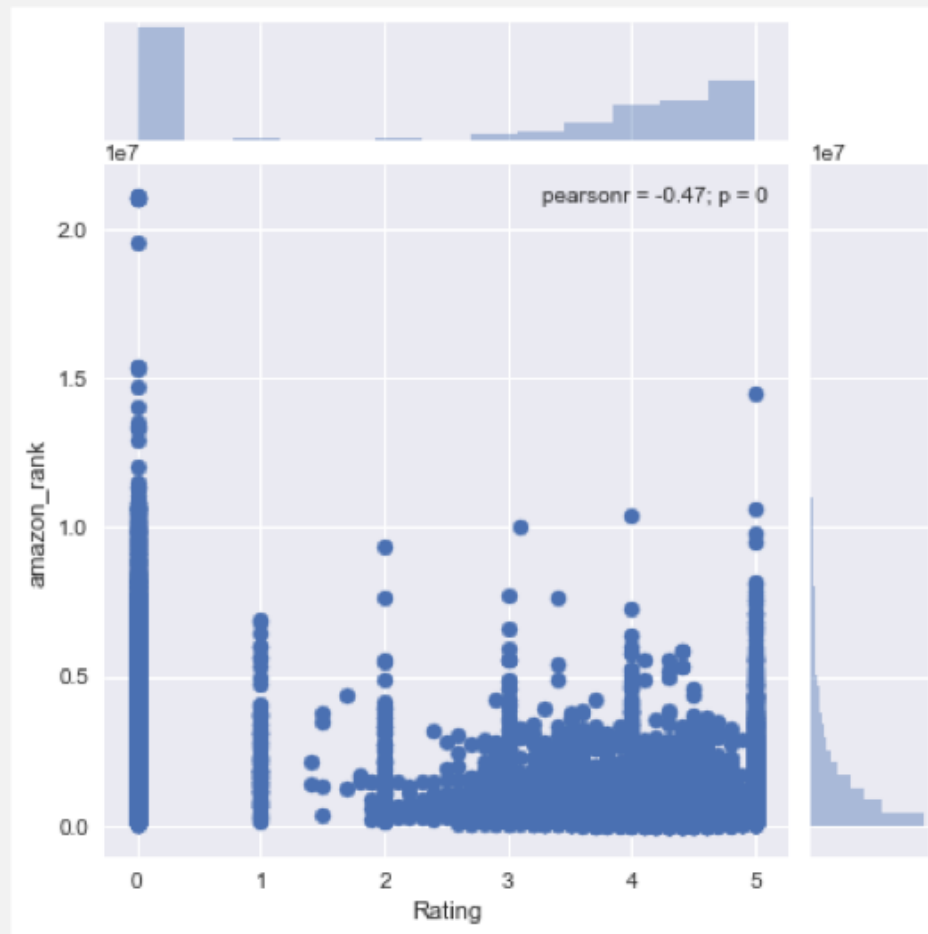


USB C to HDMI Cable 6FT, Amiroko USB 3.1 Type C (Thunderbolt 3 Compatible) to HDMI 4K Cable for Macbook Pro 2016, Macbook 12", Chromebook Pixel, Galaxy S8/S8+ etc to HDTV, Monitor, Projector by Amiroko

\$1699 prime
Get it by **Tomorrow, Feb 3**

★★★★☆ · 42

Product Features
... ★ Amiroko USB C to HDMI Cable: Connects your USB-C port devices ...



★★★★☆ ▾ 103 customer reviews
3.1 out of 5 stars

#10 in [Electronics > Accessories & Supplies > Audio & Video Accessories > Connectors & Adapters](#)

3.6 out of 5 stars

#74 in [Computers & Accessories > Computer Accessories > Computer Cable Adapters > USB-to-VGA Adapters](#)

#2,306 in [Computers & Accessories > Computer Accessories > Cables & Interconnects](#)

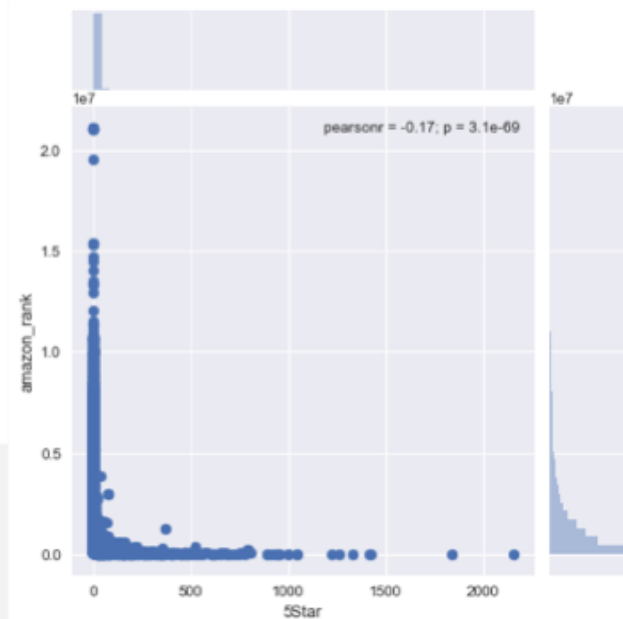
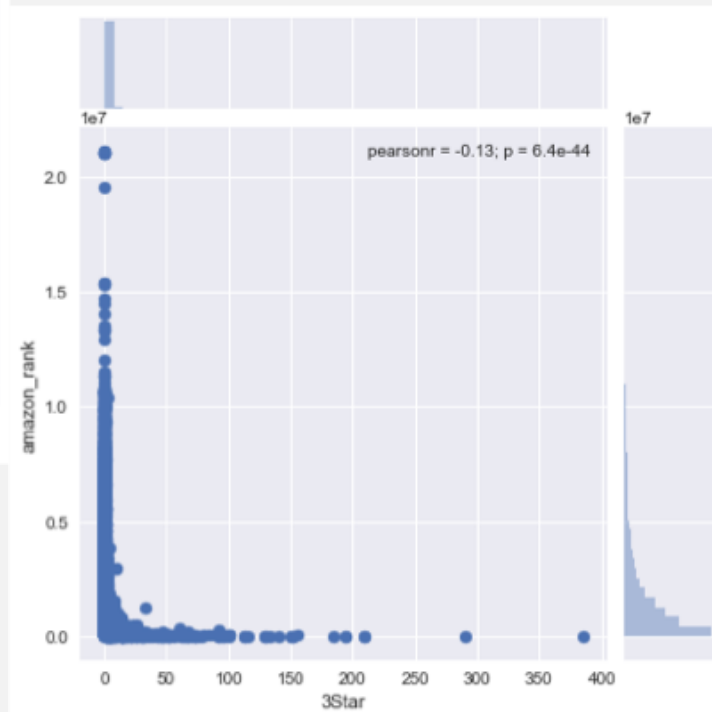
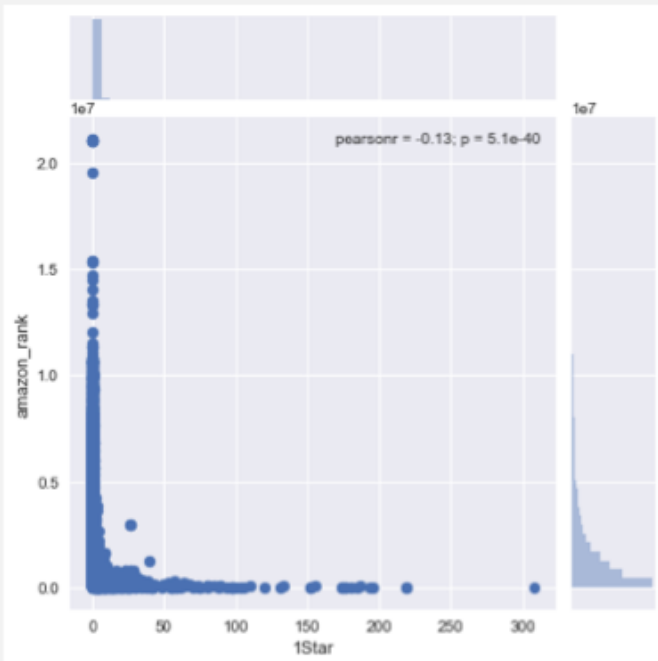
#3,479 in [Electronics > Accessories & Supplies > Cables](#)

#1,350 in [Computers & Accessories > Computer Accessories > Computer Cable Adapters > DVI-HDMI Adapters](#)

#30,522 in [Industrial & Scientific > Industrial Electrical > Wiring & Connecting > Cables & Interconnects](#)

#48,492 in [Electronics > Accessories & Supplies > Cables](#)

5 out of 5 stars



FEATURES OBSERVED

- Rating
- Price
- Review Count
- 1- 5 Star Counts (individually)
- Number of variations
- Days Since Launch
- Weight (in ounces)
- Volume
- **Amazon Rank** (label)

PROCESS OF ELIMINATION

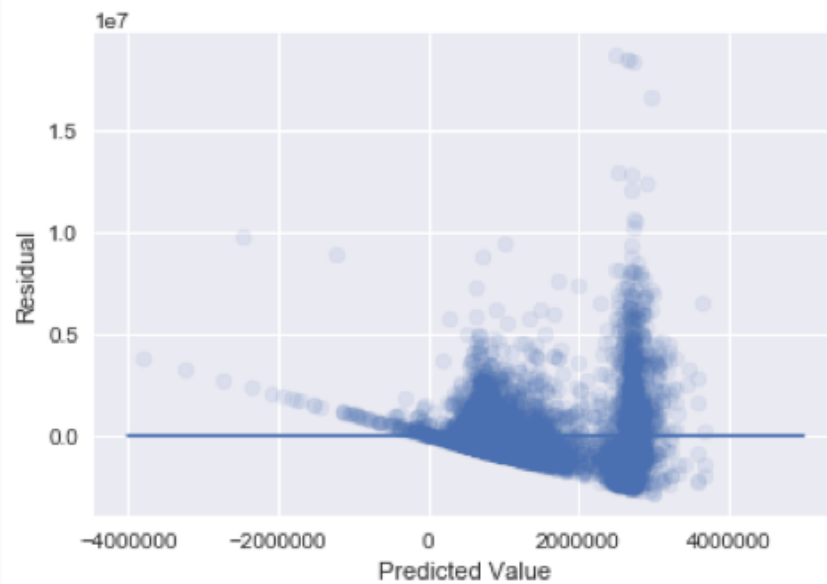
- 13038 Rows
- 12590 with ranking
- 11029 in 'Clothing Shoes & Jewelry' category

Rating	0
review_count	0
1Star	0
2Star	0
3Star	0
4Star	0
5Star	0
style_count	0
days_since_launch	2
weight_ounces	1331
volume	3983
min_price	570
amazon_rank	0

WITH VOLUME FEATURE

- 6719 Rows

OLS Regression Results



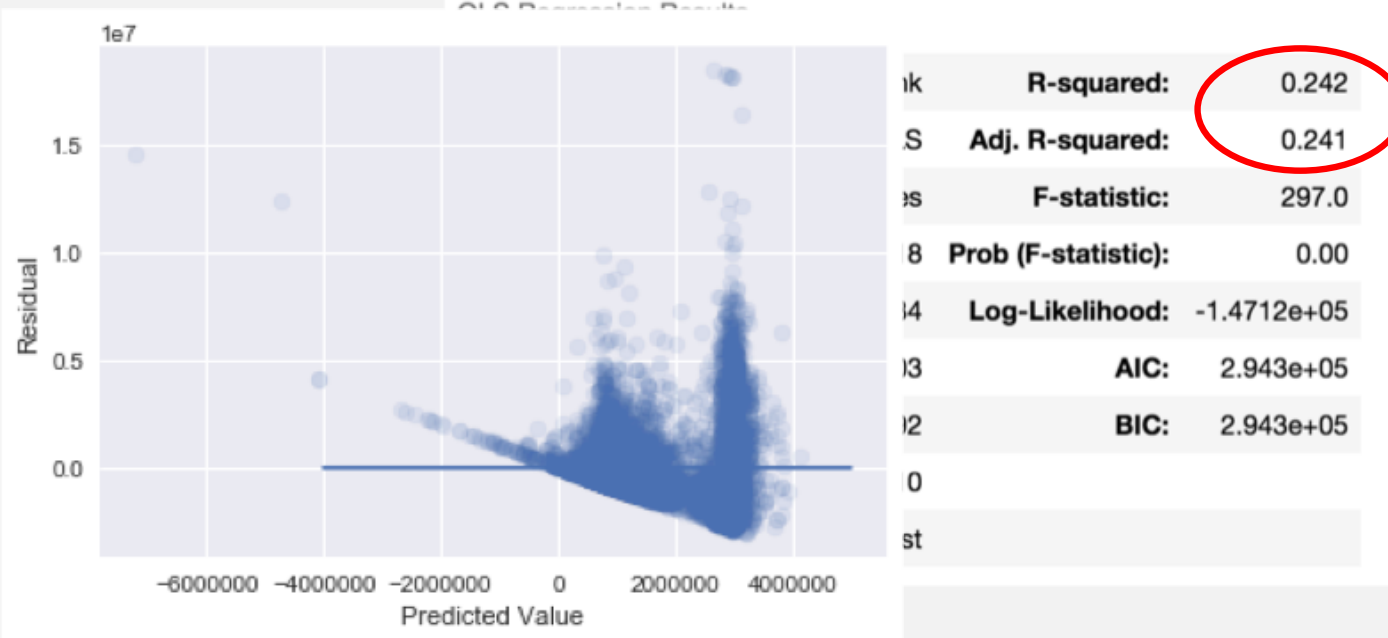
k	R-squared:	0.230
S	Adj. R-squared:	0.229
s	F-statistic:	182.5
8	Prob (F-statistic):	0.00
3	Log-Likelihood:	-1.0572e+05
9	AIC:	2.115e+05
7	BIC:	2.116e+05

1

st

WITHOUT VOLUME FEATURE

9303 rows



SET-UP

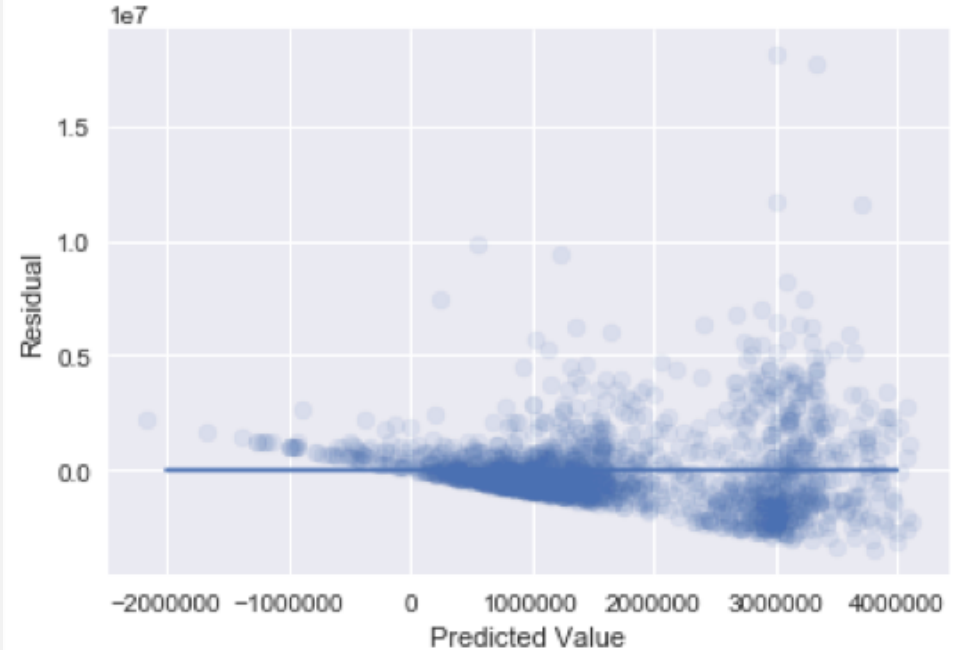
- 20% Testing
- 20% Validation
- 60% Training

SIMPLE LINEAR REGRESSION

- OLS regression score val R^2 : **0.247**
- OLS regression score val RMSE: 1777604.940
- Squared terms regression val R^2 : **0.304**
- Squared terms regression score val RMSE: 1709181.702
- Chose **Squared Terms**

SIMPLE LINEAR REGRESSION ON TEST DATA

- Trained on the 80% training data, tested on 20% test data
- Squared terms regression val R^2 : 0.284
- Squared terms regression score test RMSE: 1711967.724



SIMPLE LINEAR REGRESSION WITH POLYNOMIALS

- `PolynomialFeatures(degree=2, interaction_only=True)`
 - OLS regression with interaction terms val R^2 : 0.231
 - OLS regression with interaction terms val RMSE: 1797072.029
- `PolynomialFeatures(degree=2, interaction_only=False)`
 - OLS regression with interaction terms val R^2 : 0.268
 - OLS regression with interaction terms val RMSE: 1752478.091

INCORPORATING KFOLD & RIDGE

- 5 sets, shuffled
 - Basic Linear Regression
 - Ridge with $\alpha = 1$
- LR scores: [0.29948, -46.212056, 0.29036, 0.2856156, 0.31393]
- Ridge scores: [0.2994170, -46.23560, 0.290255, 0.285927, 0.314192]

```
Simple mean cv r^2: -9.005 +- 18.604  
Ridge mean cv r^2: -9.009 +- 18.613
```

REGULARIZATION WITH ALPHA TESTING

- Alphas from 0.0003 to 10000 (500 step increments)
- Standardized
- Ideal Alpha Values:
 - Lasso: 10,000.0
 - Ridge: 3,557.15020682
 - ElasticNet: 1.18071284

LASSOCV

- Tested alphas between 0.003 to 100,000
- Best Alpha: 6080.2242
- R^2 : 0.28292

Rating	-2402178.9	Rating**2	1486880.92
review_count	0	review_count**2	0
1Star	29098.2997	1Star**2	21442.3024
2Star	0	2Star**2	0
3Star	0	3Star**2	-22090.441
4Star	0	4Star**2	0
5Star	-361469.32	5Star**2	228504.667
style_count	-314886.94	style_count**2	190000.581
days_since_launch	557210.006	days_since_launch**2	-343440.64
weight_ounces	-458083.38	weight_ounces**2	377019.578
min_price	41709.1034	min_price**2	20840.8016

RANDOM FOREST

- R^2 : 0.417585

