

Amazon Reviews

How are Amazon reviews used?

Common scenario: want a a type of product (e.g. coffee grinder), but don't know any brands or models

Search for “coffee grinder”, sort by “Avg. Customer review” or “Relevance”

Pick an item that: fits your price range, ~4.5 stars, > 30 reviews

Scroll down to “Most Helpful Customer Reviews”, read one or two

Buy product

How are Amazon reviews used?

This approach has a heavy reliance on user submitted reviews, specifically their aggregate score and helpfulness score.

Is it a good idea to rely on the user submitted reviews?

Maybe not



reddit

SUPPLEMENTS

comments

related

other discussions (1)



I analyzed all 580 reviews on the top selling "Natural Testosterone Booster" supplement on Amazon. Pretty much all of them were bogus. (self.Supplements)

submitted 1 month ago by flexpex

Hey guys-

3 weeks ago, I [posted a study I did on reviews on manufacturer's websites](#). The #1 comment on that thread mentioned:

This is why you can also buy supplements from amazon, where negative reviews are mostly not removed, whereas suspicious positive reviews are removed. So the reviews are a "bit more" trustworthy.

I wanted to see just how much a "bit more" was, so spent several hours reading through and analyzing all 580 reviews on the #1 selling Natural Test Booster.

I found countless examples of reviewer fraud, including many reviewers stating they hadn't used the product, many reviewers who didn't even mention the product, even one user stole a before/after picture from [r/progresspics](#) and uploaded it as their own.

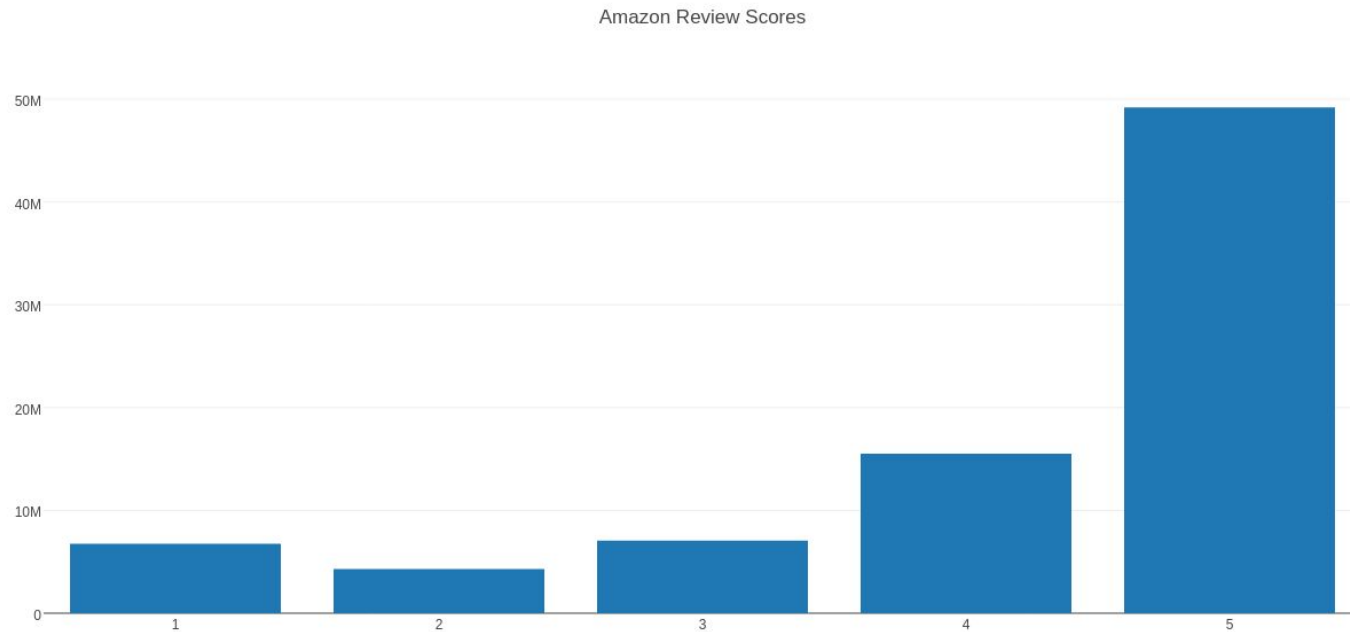
Less than 10% of the reviewers were "verified purchasers", and most of the review histories I checked showed that they were only rating products from the same brand, and they were giving them all 5 stars.

Basically, the reviews looked even worse than I thought they would, with essentially no signs of honest, thorough or detailed reviews whatsoever.

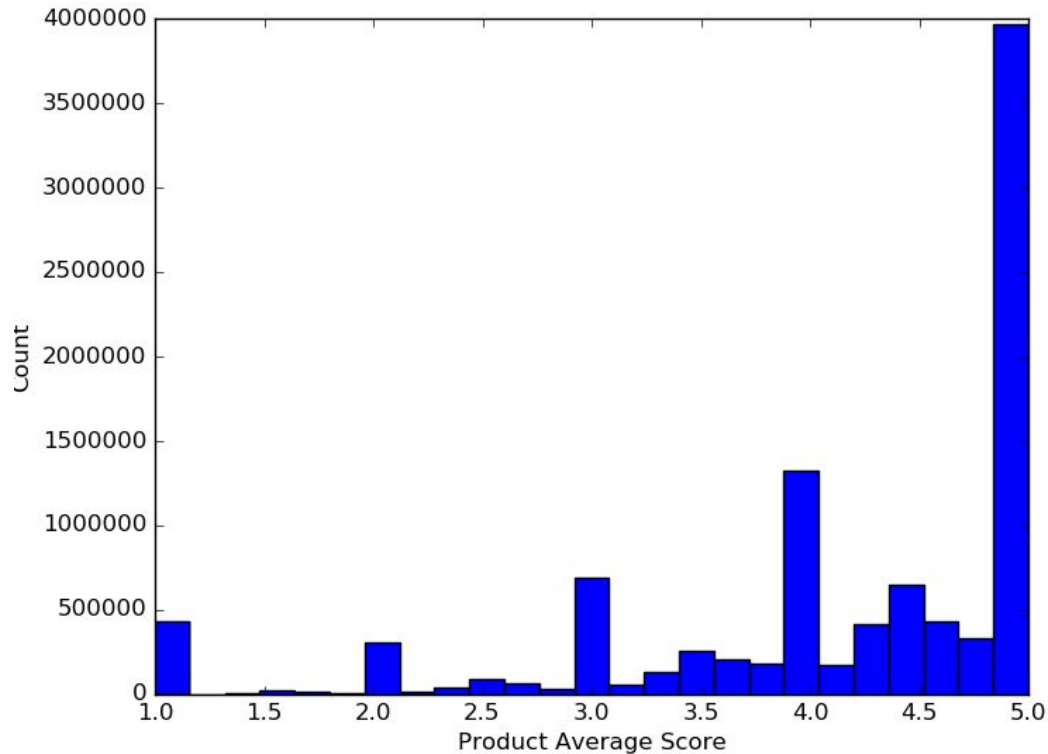
[You can read the full study here](#) (warning: long)

31 comments share save hide give gold report

Review score distribution

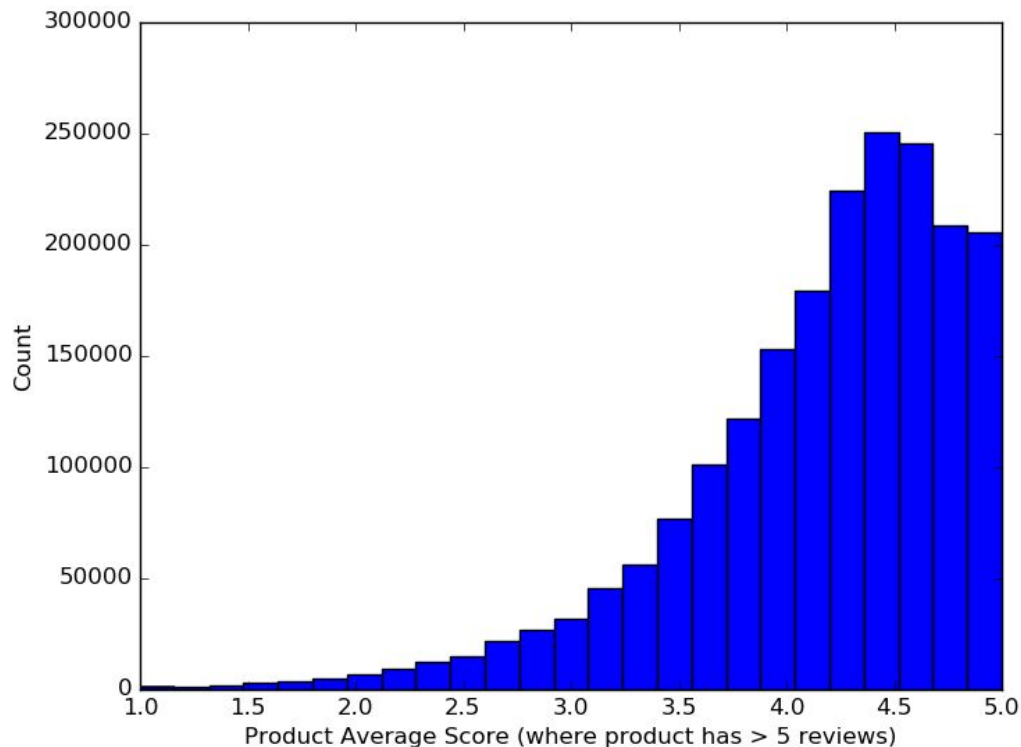


Product aggregate scores



Something is wrong

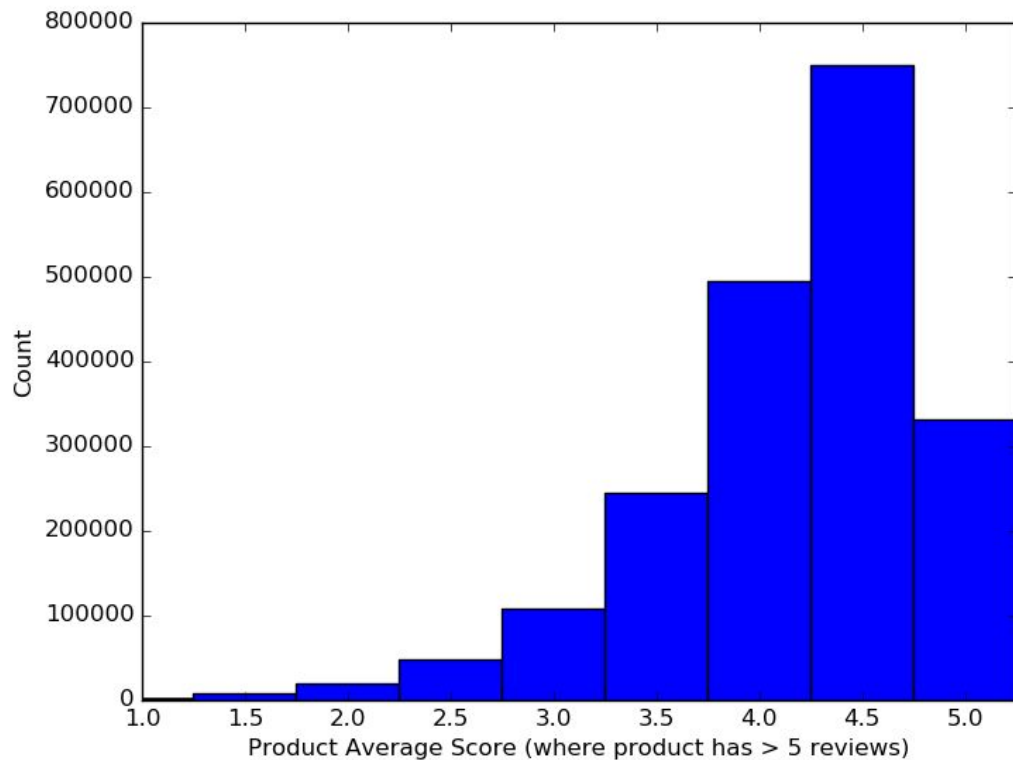
Product aggregate scores



Look at products with > 5 reviews

Peak bin ~4.3

Product aggregate scores



Let's change the bucket width

Why did I pick these numbers?

Why these buckets?

The UI!

amazon Fast & Free

All Departments wrist watch

Shop by Department - Kyle's Amazon.com Today's Deals Gift Cards Sell Help Hello, Kyle Your Account

1-16 of 693,351 results for "wrist watch"

Show results for

Related Searches: watch, wrist watch for men, wrist watch for women.

Men's Fashion

- Men's Wrist Watches
- Surf, Skate & Street Wrist Watches
- Men's Watch Bands

Women's Fashion

- Women's Wrist Watches
- Women's Watches

Outdoor Recreation

- Sport Watches
- Outdoor Recreation Accessories

Boys' Fashion

- Boys' Wrist Watches

Girls' Fashion

- Girls' Wrist Watches
- Girls' Watches

Electronics

- Wearable Technology
- Smart Watches

Sports Fan Shop

- Sports Fan Jewelry & Watches

Cell Phones & Accessories

- Smart Watch Accessories

Clothing, Shoes & Jewelry

- Sports & Outdoors
- Home & Kitchen
- Everything Else
- Health & Personal Care
- Industrial & Scientific
- Toys & Games
- Automotive
- Office Products
- Tools & Home Improvement
- Arts, Crafts & Sewing
- Books
- Video Games
- Patio, Lawn & Garden
- Beauty
- CDs & Vinyl
- Handmade
- Baby
- Collectibles & Fine Art
- Musical Instruments
- Apps & Games
- Digital Music
- Movies & TV
- Pet Supplies
- Kindle Store

Bessky® Luxury Men's Black Round Dial Clock Leather Strap Quartz Wrist Watch
by Bessky®-930
\$49.99 ~~\$3.39~~ + \$1.00 shipping
See all 519,205 items
Show only Bessky®-930
★★★★☆ • 121

Casio Men's W800H-1AV "Classic" Sport Watch with Black Band
by Casio
\$13.97 ~~\$49.99~~ Prime
FREE Shipping on orders over \$35
See all 519,205 items
Show only Casio items
★★★★☆ • 1,137

Padgene LED Wrist Watch - Silicone Rubber Gel Jelly Unisex Bracelet, Digital Band, Black
by Padgene
\$4.99
FREE Shipping and 1 more promotion
See all 519,205 items
Show only Padgene items
★★★★☆ • 10

Casio Men's MRW200H-1BV Black Resin
by Casio
\$14.74 ~~\$49.99~~ Prime
FREE Shipping on orders over \$35
See all 519,205 items
Show only Casio items
★★★★☆ • 2,344

Casio Unisex MQ24-7B Analog Black Resin Watch
by Casio
\$9.95 ~~\$49.99~~ Prime
FREE Shipping on orders over \$35
See all 519,205 items
Show only Casio items
★★★★☆ • 578

Casio Men's MQ24-1E Black Resin Watch
by Casio
\$10.26 ~~\$49.99~~ Prime
FREE Shipping on orders over \$35
See all 519,205 items
Show only Casio items
★★★★☆ • 1,597

Timex Men's T2H281 Easy Reader Silver-Tone Watch with Black Leather Band
by Timex
\$21.99 ~~\$49.99~~ Prime
FREE Shipping on orders over \$35
See all 519,205 items
Show only Timex items
★★★★☆ • 2,890

New Russian Aviator Pilot Army Military Time Black Leather Band [Black]
by Oulm
\$11.99 Prime
FREE Shipping on orders over \$35
See all 519,205 items
Show only Oulm items
★★★★☆ • 242

★★★★★ ▾ 26,500

★★★★☆ ▾ 2,344

★★★★☆ ▾ 1,597

★★★★☆ ▾ 121

★★★★☆ ▾ 35

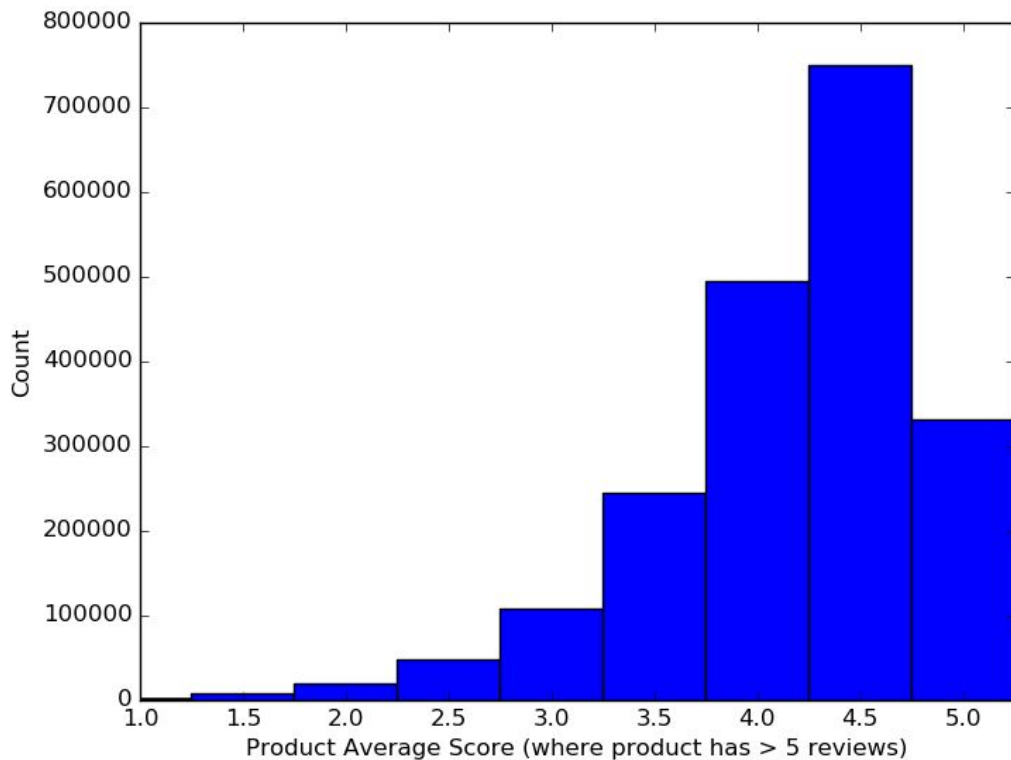
★★★★☆ ▾ 145

★★★★☆ ▾ 10

★★★★☆ ▾ 4,118

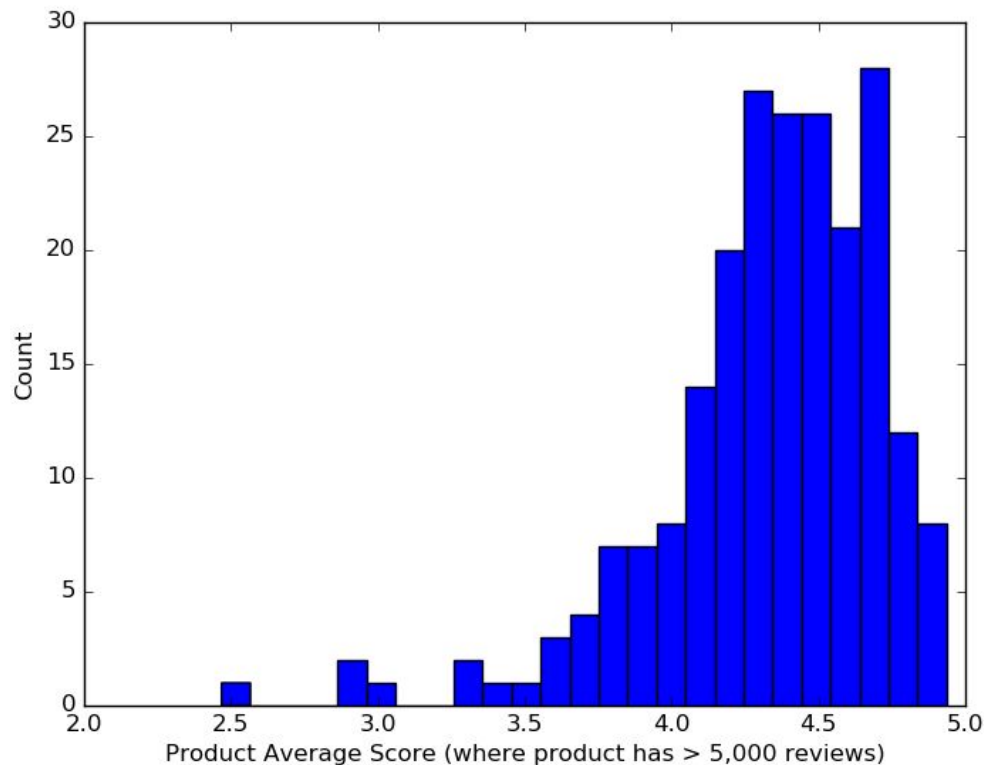
★★★★☆ ▾ 3

Product aggregate scores



Range	Stars	Count	Percent
1.00-1.24	1.0	1831	0.09%
1.25-1.74	1.5	7702	0.38%
1.75-2.24	2.0	19894	0.99%
2.25-2.74	2.5	48707	2.43%
2.75-3.24	3.0	107941	5.37%
3.25-3.74	3.5	245643	12.23%
3.75-4.24	4.0	495257	24.65%
4.25-4.74	4.5	750529	37.36%
4.75-5.00	5.0	331302	16.49%

Product aggregate scores (aside)



For fun let's look at items with over 5,000 reviews

Kind of similar, but who's on top?

Who's that one at 2.5?

HELP!

But Amazon has a helpfulness measure that it uses to highlight reviews!

Most helpful customer reviews

★★★★★ **Nice Weight, Nice Looks, Perfect Fit!**

By [rtrifts](#) on Sept. 5 2015

Verified Purchase

This is cheap, nice weight, double ended to fit either size of a normal filter cup and I was pleasantly surprised. For \$5, this a great gadget which does exactly what you think it will and looks and feels great while doing it. It's much better than the plastic tamper that came with my Gaggia. Buy with confidence.

Was this review helpful to you? [Report abuse](#)

1 of 1 people found the following review helpful

★★★★★ **Sturdy.**

By [JESUS CASTRO](#) on Nov. 17 2014

Verified Purchase

It does exactly what it is supposed to. High quality. Sturdy.

Was this review helpful to you? [Report abuse](#)

1 of 1 people found the following review helpful

★★★★★ **Very happy with this.**

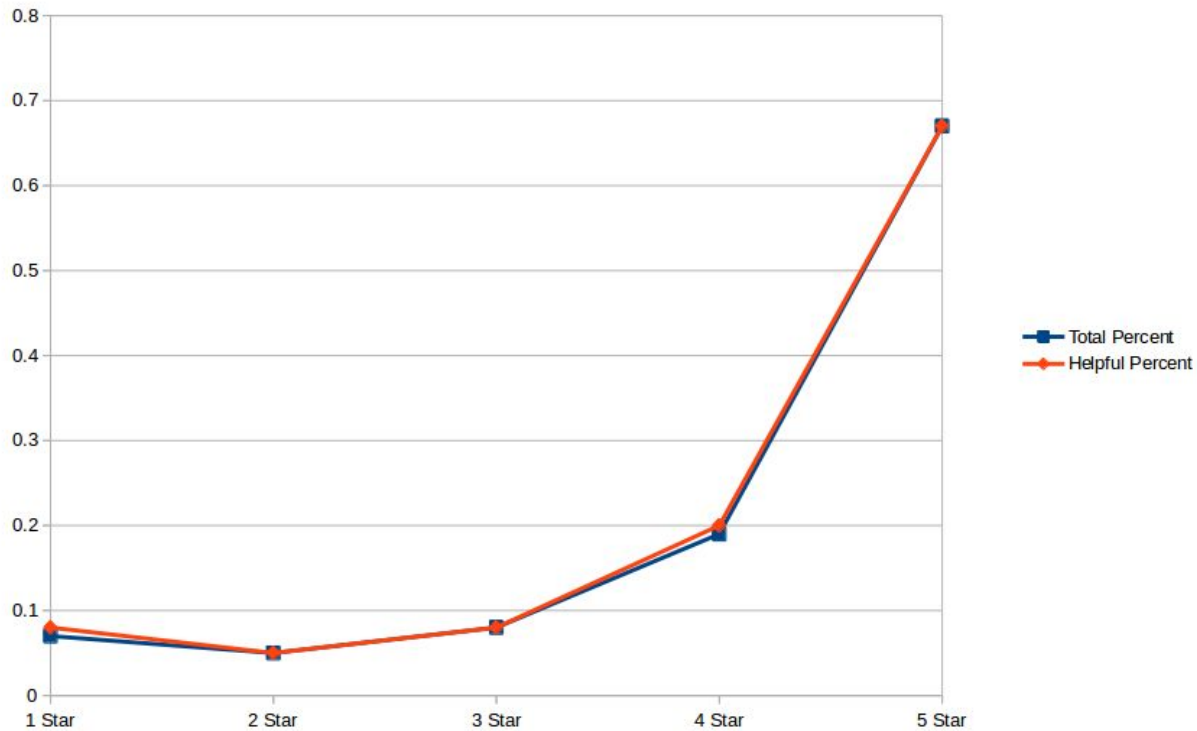
By [Anne](#) [TOP 1000 REVIEWER](#) on March 11 2015

Verified Purchase

Very good as it has two sizes and nice weight. Great price.

Was this review helpful to you? [Report abuse](#)

“Helpfulness”



“Helpfulness” continued

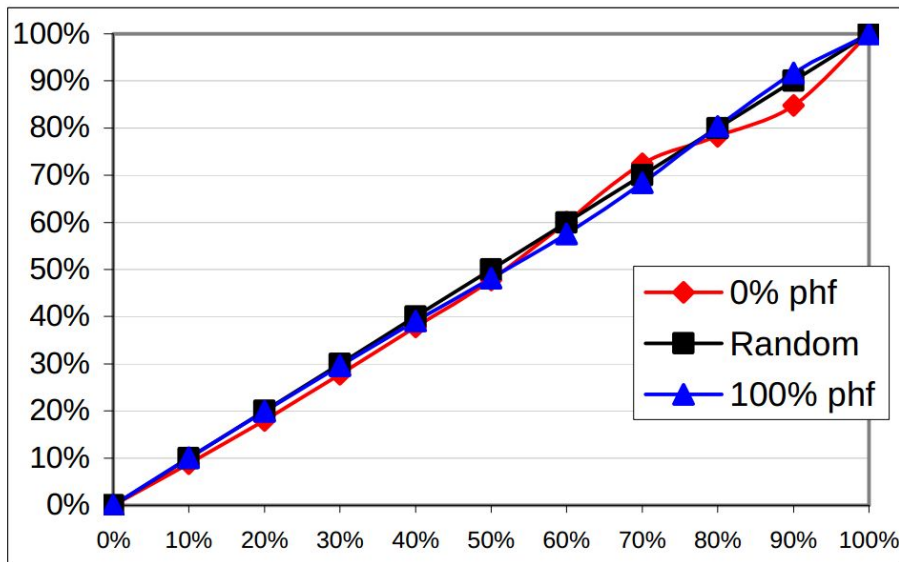


Figure 10: Lift curves for reviews with 0 and 100% positive feedbacks with minimum of 1 feedback.

Bing Liu has written several papers on spam in amazon reviews

Reviews with 100% positive helpful reviews were just as much spam as reviews with 0% helpful reviews

Is it spam?

Is spam causing this intense positive skew?

“Opinion Spam and Analysis” (Jindal, et al. 2008) created a model that could identify spam in amazon reviews ~80% of the time.

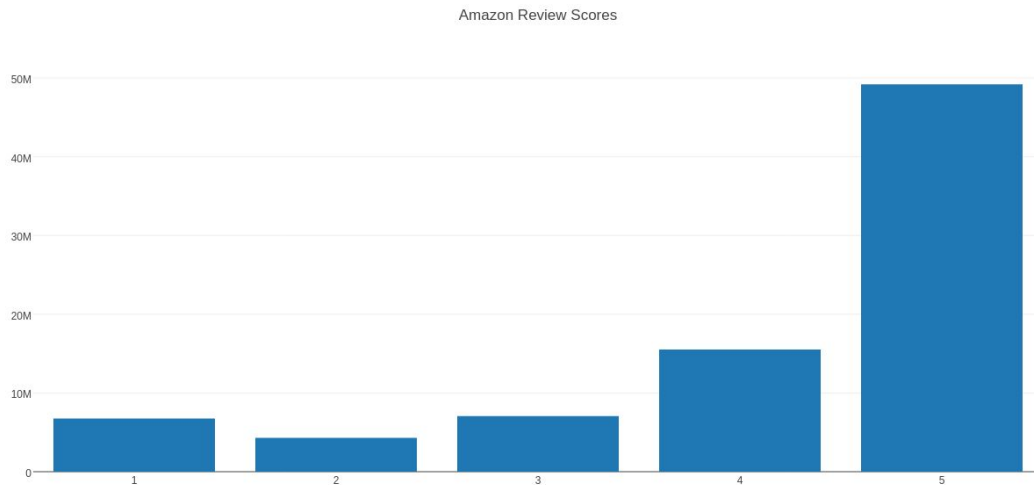
They found ~1% of reviews could be considered spam.

Is it spam?

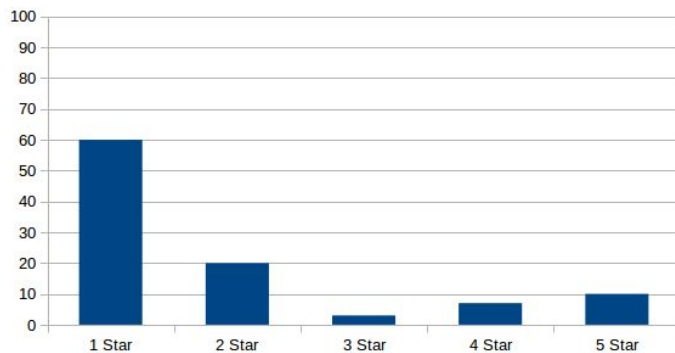
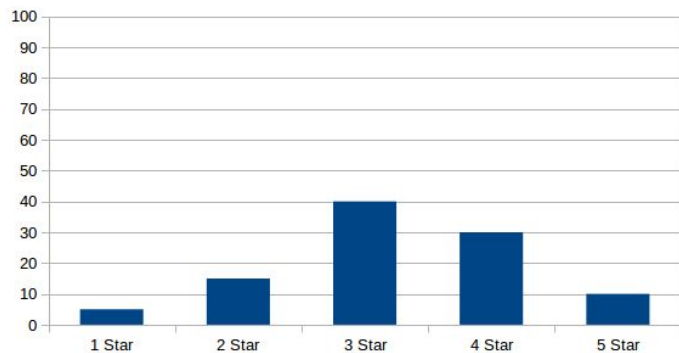
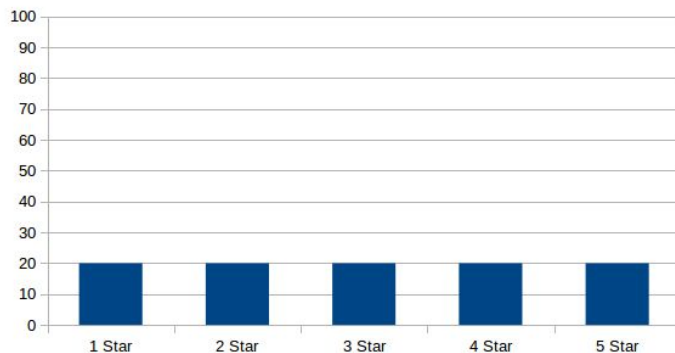
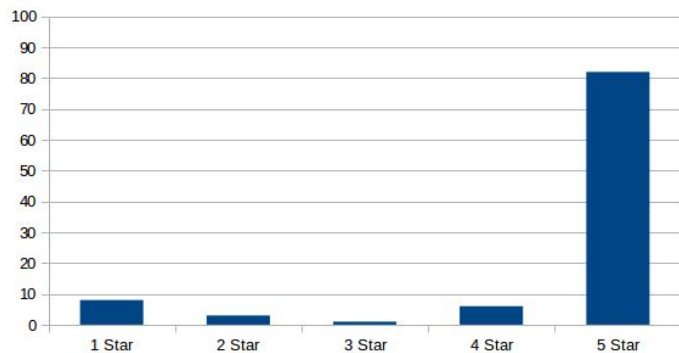
Remember our Histogram:

1% will have almost no effect

Need something else



Who do you trust?



Alternate: A-Scores

Give each reviewer a score based on their review history

Use reviewers score as a weight when calculating mean score of products

-> Investigate how products scores change with this approach

Use A-Score to decide what reviews to highlight for a product

Calculating A-Scores

What changed

What changed

What changed

Can I use this?

Yes!

The Dataset