

Project 1

STQD6114 – Unstructured Data Analytics

P152419 – Hazim Fitri Bin Ahmad Faudzi

Part 1 – Task 2

When choosing for an audio device, people often confused which to choose between an over-ear headphone or an in-ear earbuds. Both products have been continuously improving and can promise an immersive experience, but their form factors, and user experience cater to different preferences. By web scrapping data from Amazon e-commerce website, a comparative review can be discovering the trends.

	Price	Rating	Review Count
Minimum	6.99	1.000	1
1 st Quartile	18.98	4.300	578
Median	26.93	4.400	3,462
Mean	42.39	4.386	44,087
3 rd Quartile	49.95	4.500	23,084
Maximum	199.99	5.000	256,542

Table 1 Summary of Earbuds

	Price	Rating	Review Count
Minimum	6.95	3.700	5
1 st Quartile	21.89	4.300	698
Median	32.99	4.400	4384
Mean	55.22	4.424	19,465
3 rd Quartile	79.90	4.500	17,848
Maximum	448.00	5.000	240,559

Table 2 Summary of Headphones

The table above reveals a noticeable difference in pricing trends between earbuds and headphones. Earbuds generally have a more affordable price range, with an average price of

\$42.39. While the most affordable earbuds can be found for as low as \$6.99, and the priciest models reach up to \$199.99. The median of \$26.93 shows that earbuds are within a budget-friendly range and a strong market for entry to mid-range options.

In contrast, over-ear headphones, while also starting in at a almost similar price point of \$6.95, it has a higher average price point at \$55.22. The most expensive headphone from the table shows that it can go up to \$448.00, indicating a premium segment for high-quality music or feature-rich models. The median price of \$33.00 is still higher than earbuds, adding more evidence that headphones are one tier above earbuds. This suggests that while both products offer budget options, premium features are more common in the headphones compared to earbuds.

When it comes to user satisfaction, both earbuds and headphones boast an impressive average rating. Earbuds have an average rating of 4.39 out of 5 stars, with the most common rating 4.3 stars. On the other hand, headphones have a slightly upper hand with an average rating of 4.42 out of 5 stars and the most rating is 4.4 stars. The rating ranges also show strong user satisfaction, with earbuds ranging from 1.0 to 5.0 while headphones ranging from 3.7 to 5.0. This suggests that customers are satisfied with their audio experience with some minor variations might be due to specific features or individual preferences.

The review counts show that there is a quite large of differences of engagement from customers. Earbuds, on average, have significantly more reviews per product, with an average review count of approximately 44,087. This is significantly higher than over-ear headphones, with average reviews of 19,465. This disparity could point to higher sales volume of earbuds. With features such as portability, lower price point, and convenience likely contribute to a higher sales volume.

In conclusion, both in-ear earbuds and over-ear headphones offer excellent audio but they cater to different needs and preferences. Earbuds excel in portability, convenience, and affordability. Their compact design makes them ideal for on-the-go listening, workouts, and quick calls. Headphones typically offer a more immersive sound experience with superior active noise cancelling and longer battery life. While this options is generally higher, it targets more on audiophiles, and music professionals.