Advanced Data Visualization – C745

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# Data Scrape (A & B)

My links are attached that I used to scrape the data on the four different vehicles into Excel.

# Data Configuration (C, D, & E)

I manually cleaned the data by assigning ranks from 1-4 for the different criteria. 4 being the best in a given category, down to 1 being the worst in the category. This way my categories could be standardized instead of being mainly skewed by the categories that had very high starting values, like purchase price. I created a scores sheet and referenced those score in my formulas to come up with a standardized weighted score for each vehicle in each category. I used weights 9, 9, and 4 to have a similar weight total as the management team.

# Data Presentation (F, G, & H)

Please see the 3 included PDF documents.

# Car Choice (I)

Upon first glance at the management weighted scores the Ford Escape narrowly beats the Honda CRV, and looks to be the car to choose. After looking at the data more closely and combining my criteria with management’s, the Honda CRV is the clear choice. Slide three compares the two vehicles head-to-head with an area graph and table. These clearly show that the CRV is better than, or just about equal to, in all six of the criteria. In safety features, price point, maintenance, and insurance the two cars stand mostly neck and neck. The biggest differences come in the fuel economy and resale value, two areas that the CRV has significantly better values in. When all six of these criteria are looked at together and scored based on the combined weights, and the actual data figures examine a bit closer in the table, the CRV quickly becomes the best choice.

# Storytelling (J)

I tried to have the dashboards that I created tell the story by creating a logical flow throughout the graphic order, maintaining a similar format throughout the slides, using colors that made the most sense, and comparing the two contenders together in their own graphics towards the conclusion.

I thought the management team would like to see the raw data comparisons, so I included those data points in three different bar graphs at the top of the first two slides. Showing the weight of each criteria afterwards with the score that each car earned makes for a natural progression that the presentation should take.

I thought using the same format for slides two and three would make it easier for the team to quickly compare the data, instead of having to readjust to a new format with each different comparison. I used the same graphs and postioning on the first two slides, and just adjust the data, titles, and colors to match my criteria.

I chose to use the blue, red, teal, and grey for the cars, and kept that consistently through any chart comparing the cars with a single value point. I chose the colors that most closely matched the logo that I found on the company’s website, which hopefully helps with familiarity and to more quickly be able to decipher which car is being represented with different values. I also kept the criteria colors contant throughout the graphics, using green for fuel economy, purple for insurance, orange for maintenance, red for price point, yellow for resale value, and teal for safety features.

The Ford Escape and CRV were the two cars vying for the winning spot on sheets one and two, and I thought management would like to see a couple graphics depicting how they compared directly to each other, so that we could make an informed decision together after talking about the data on the third slide. Comparing those two cars with the table and graph on slide 3 helps to sell the idea that even though the Ford Escape barely eeked out a victory per management’s top criteria. When you look at my personal criteria, and even combine the two, the CRV wins pretty handedly, especially in the resale value field.

These tactics helped me to tell a concise but conclusive story about why the CRV should be chosen in place of the Escape.

# Links (K)

[Car comparison from Kelly Blue Book](https://www.kbb.com/compare-cars/results/?vehicleIds=439781|439688|436474|440123)

[Ford Escape 5-year cost to own](https://www.kbb.com/ford/escape/2019/s/?vehicleid=439781&intent=buy-new)

[Honda CRV 5-year cost to own](https://www.kbb.com/honda/cr-v/2019/lx/?vehicleid=439688&intent=buy-new)

[Hyundai Santa Fe 5-year cost to own](https://www.kbb.com/hyundai/santa-fe/2019/24-se/?vehicleid=436474&intent=buy-new)

[Toyota Rav 4 5-year cost to own](https://www.kbb.com/toyota/rav4/2019/le/?vehicleid=440123&intent=buy-new)