

Report: Doug scores, how you can make use of it

Introduction

You may be a car enthusiast or prospective car buyer, but at the end of the day you can't try ALL cars before buying. Therefore, you probably would rely on reviewers who create written or video content to give objective and relevant reviews of the cars you're interested in. Thus it's important to evaluate how useful these reviews are.

So in this case study, we'll be looking into Doug DeMuro's vehicle review scores and how they were derived. The end goal would be to understand how reliable these review scores are, especially based on objectivity and relevance to you.

This report also summarises some of the key insights from Doug.

Brief overview of review scores and dataset

The scores are computed based on two types of criteria: weekend and daily criterias. [According to doug himself](#): "The "Weekend" categories measure a car's appeal to enthusiasts; in other words, how much fun it would be to drive on the weekend. The "Daily" categories, meanwhile, focus on a car's livability and practicality."

Weekend criteria:

1. Styling (interior and exterior)
2. Acceleration
3. Handling
4. Fun Factor
5. Cool Factor

Daily criteria:

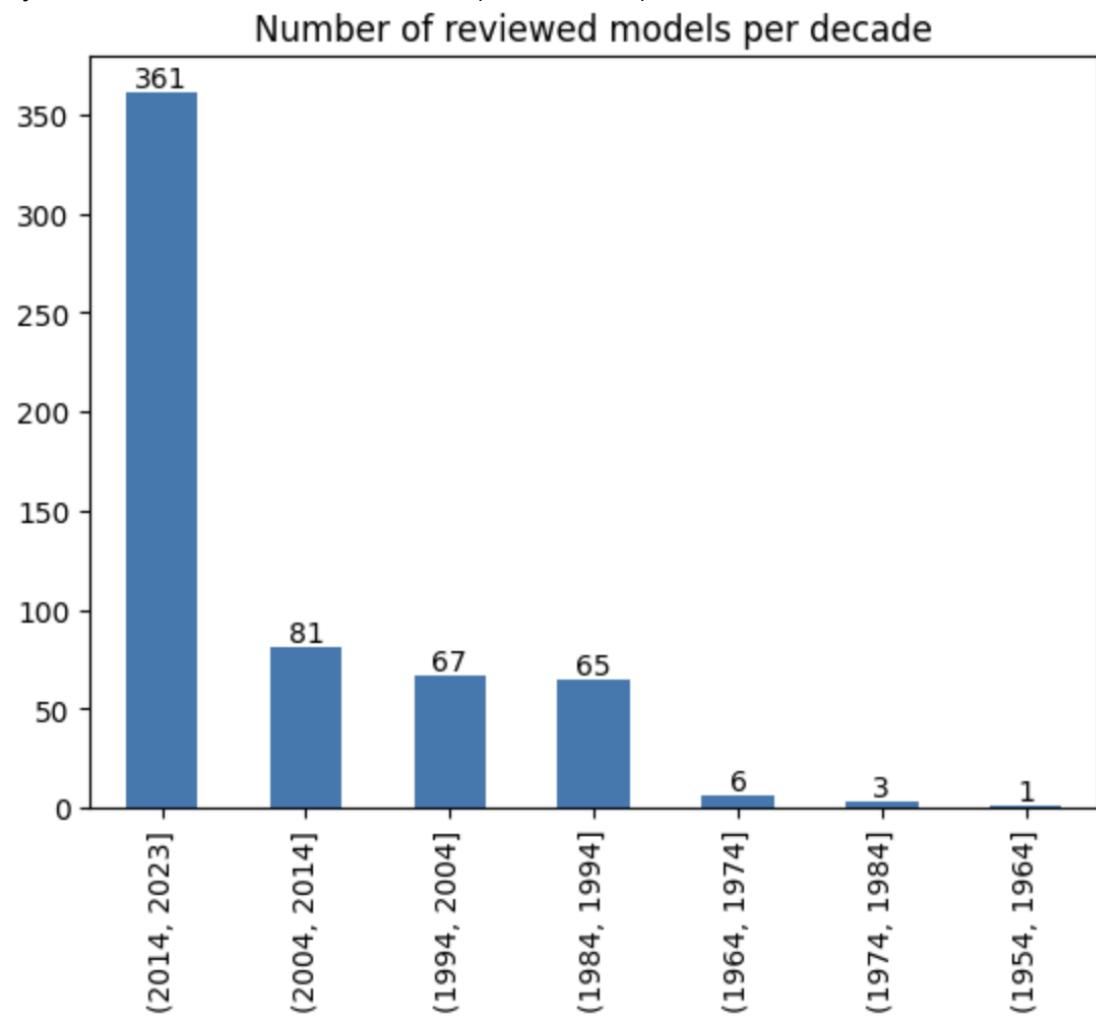
1. Features (such as having heated seats and other quality of life features)
2. Comfort
3. Quality
4. Practicality
5. Value

All these values are a 0-10 rank-based scoring based on Doug's relative experience against other cars. These values are just summed up, with equal weightage, to form the Doug Score.

Some general statistics on the dataset:

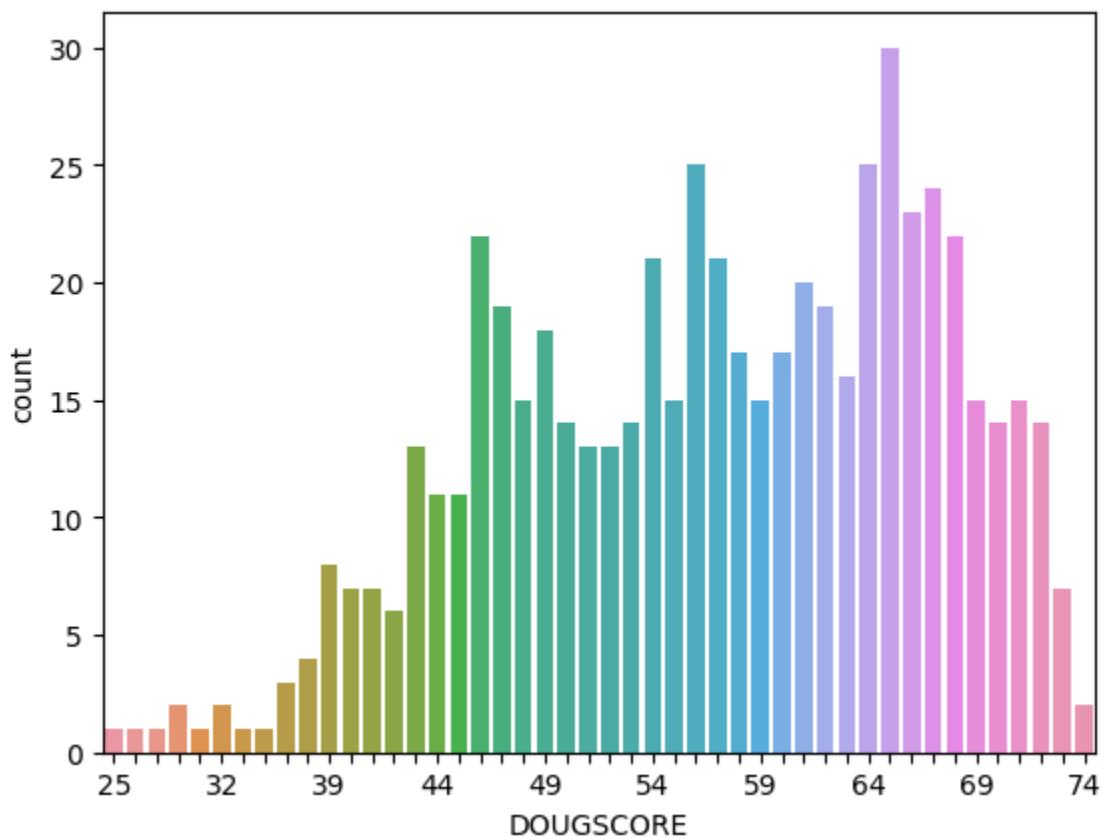
1. There are 585 total unique models reviewed, spanning from 1954 to 2023

- Majority of reviews are in the last decade (2014-2023),



- Doug's a youtuber born in 1988, he started his YouTube channel in 2013. Thus it's safe to say this dataset's reviews are done in the past decade. Therefore at least vehicle evaluations are likely compared by similar standards. E.g. Good acceleration by the last decade's standards hasn't really changed that significantly, thus a car whose acceleration is reviewed as 8/10 should tally with modern-day 8/10 standards.
- There are some relatively more subjective criteria such as fun and cool factors, mixed objective and subjective factors like comfort and styling, and more objective factors like acceleration and handling.

5. Doug scores are slightly skewed towards the higher end



Key Findings

Best cars based on criteria

This section would talk about the best in their respective aggregate categories. If otherwise specified, best is defined over the whole time frame from 1954 to 2023.

A) Fun factor, practicality, value

If you're keen on a balanced car that gives enough fun, without compromising too much practicality and overall good value-for-money, here are the top 5 vehicles

1. Rivian R1T (2021)



2. GMC Hummer EV Pickup (2022)



3. Dodge Ram TRX (2021)



4. Ford Raptor (2013)



5. Jeep Gladiator Mojave (2020)



You'll see some common themes cropping up from Doug's scoring, for this it clearly shows the best of practicality and fun are pickup trucks. They can carry loads of stuff and people, can do off-roading, and you can obtain it at a reasonable price that's typically cheaper than a sports car or Residential Vehicle. Furthermore, these exist in the last decade so you could find one first hand or good quality second hand condition.

This result is definitely consistent with Doug's explanation of practicality as cargo volume on his site. If your definition of practicality is different you should try to ignore this value. For example, if

you live in the city, these are utterly impractical whilst a small compact car might fit the city streets better, and likely to have better fuel economy. Cargo volume might be useful, but if the majority of your cargo is people, you wouldn't want them to sit at the loading bay in the bleak mid-winter. Despite Doug considering fuel economy in this attribute, it is not known if the weightage of cargo volume to fuel economy is fixed.

B) Acceleration, handling, comfort

1. McLaren Speedtail (2020)



2. Lucid Air Dream Edition (2022)



3. Bugatti Divo (2019)



4. Bugatti Chiron Pur Sport (2021)



5. Bugatti Chiron (2018)



Doug's evaluation of these three criteria has been made mainly by hypercars where they totally blow the other competitors out of the way in terms of acceleration and handling for sure. These

hypercars, especially the bugatti, are known to don luxurious interiors and amazing suspension that maintain comfort even at blazing speeds. The only exception is the lucid air dream where it has the performance of a sports car but I'd assume virtually unparalleled comfort, not to mention EV cars are known for their acceleration by nature that can rival the best of road-legal hypercars.

C) Styling, cool factor, quality

1. Porsche Carrera GT (2005)



2. McLaren F1 (1994)



3. Ferrari Monza SP1 (2020)

4. Ferrari 250 GT Lusso (1963)



5. Mercedes-Benz 300SL Gullwing (1954)



These are either classic iconic cars, or truly modern-ly stylish with top quality. This ranking I would take subjectively, but they do tally with what most car enthusiasts and car shows would call cool, stylish and great quality.

It's cool to see these iconic cars, but some of these are totally out of reach and totally inaccessible. Let's do a quick investigation into vehicles ranking at least 5 on the practical scale and not too old (at least 1990, 30 year old cars).

Aston Martin_Lagonda Taraf (2018)



Mercedes-Benz_G63 AMG 6x6 (2015)



Porsche_Taycan Turbo S (2020)



Rolls-Royce_Phantom (2018)



Lucid_Air Dream Edition (2022)



Now that's more within reach for the top 5%, with decent enough practicality, you can ride in style on a more regular basis, especially since some have decent features like... at least a boot and 4 doors?! Or you know, at least not having to worry about breaking down and spending a fortune to maintain compared to classic cars just like the Mercedes-Benz 300SL Gullwing.

D) Weekend score, daily score

The following models have the top 5 weekend + daily scores = dougscore!

Overall for brands, the best doug scorers are the following

- Lucid
- Rivian
- Rimac
- Koenigsegg
- Pagani
- Bugatti

For the weekend scores, these 5 brands top it

- Koenigsegg

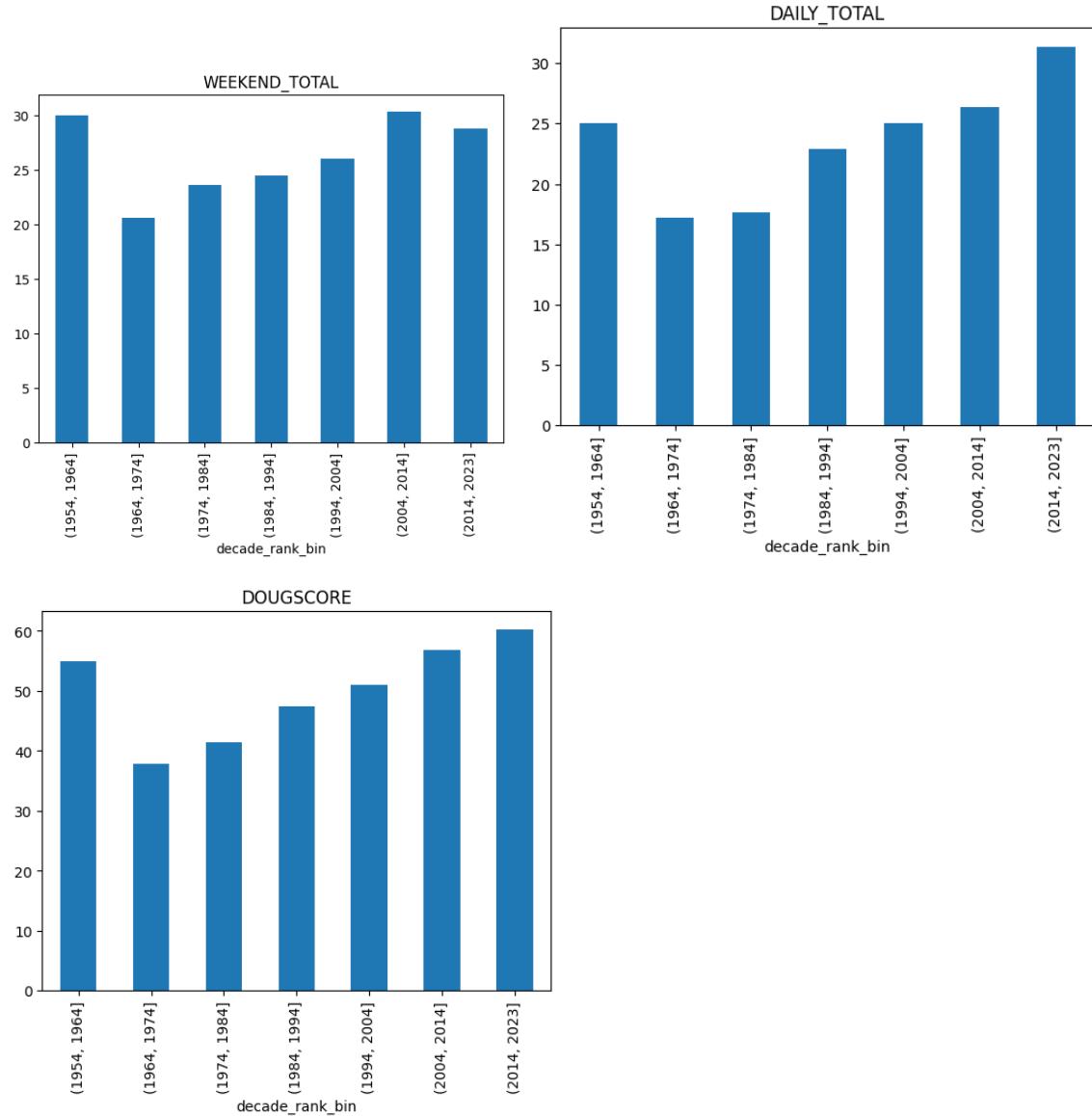
- Pagani
- Rimac
- BAC
- Bugatti

And for daily scores

- Mercedes-Maybach
- Rivian
- Genesis
- Kia
- Lucid
- Range Rover

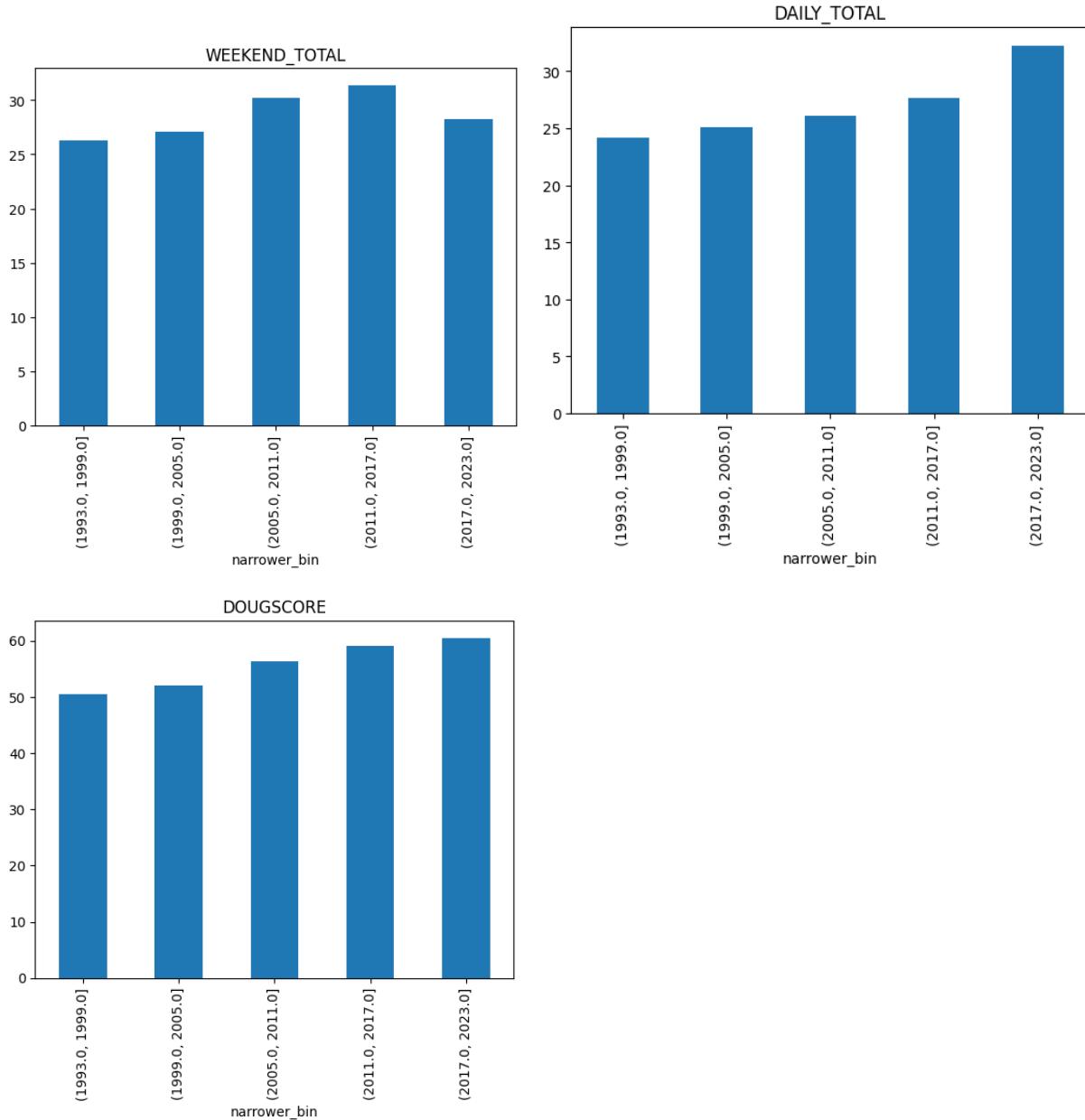
We can see that the top 5 highest scoring doug scores are dominated by performance cars, weekend scores dominated by performance cars as well, and daily scores dominated by either luxurious road cars or all-rounder economy cars or cars that can off-road and carry lots of load.

E)Weekend score, daily score, model year



We can observe that generally weekend total, daily total and hence dougscore increases with year of release for model of vehicle, which doug is implying the more modern, the more value you'll on a day to day basis or on a weekend basis or both! This sounds intuitive as the automobile industry as a whole has improved, which should reflect in overall greater benefits across the industry as the years go by.

Again, for the sake of accessibility to modern vehicles, we'll analyse the same for the past 30 years.



Similar pattern is observed as well for this shorter time frame with 5 year intervals.

Digging deeper

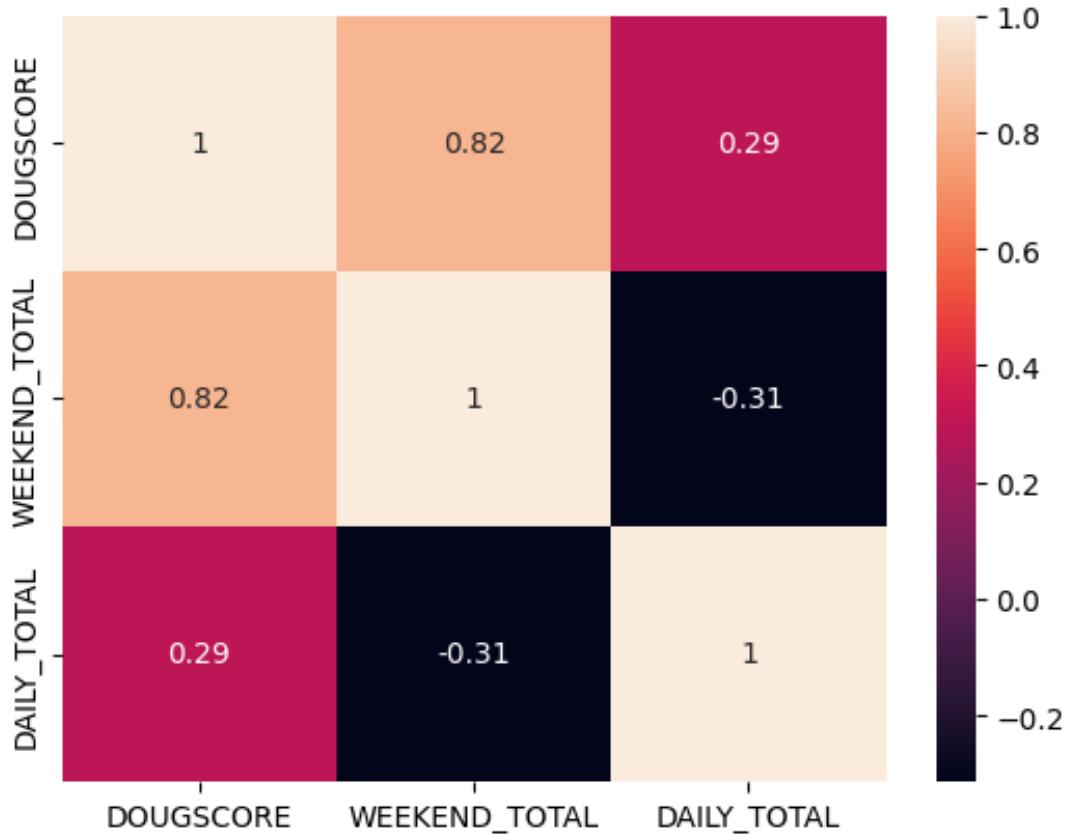
In the previous section, you've got a great overview of Doug's recommendations across various criterias that target different audiences. However, let us dig deeper into what makes up these doug scores. By doing so, you would be able to better understand how important certain criteria are with respect to overall weekend, daily and doug scores, and thus be able to make a more educated judgement on which criterias should matter more to you when deciding on your next vehicle.

Correlation analysis

Let's begin analysing how strongly associated these individual components are. To do so, we make use of the concept of correlation; the stronger the correlation, the more highly associated the components are.

Why does this analysis matter? As the Doug score is a uniformly-weighted sum of all the individual components, ideally each component should capture a unique aspect of the vehicle to represent a fair overall judgement of the vehicle. Otherwise, Doug may have inadvertently placed more emphasis on certain unique aspects of vehicles, such as on performance or daily utility for example.

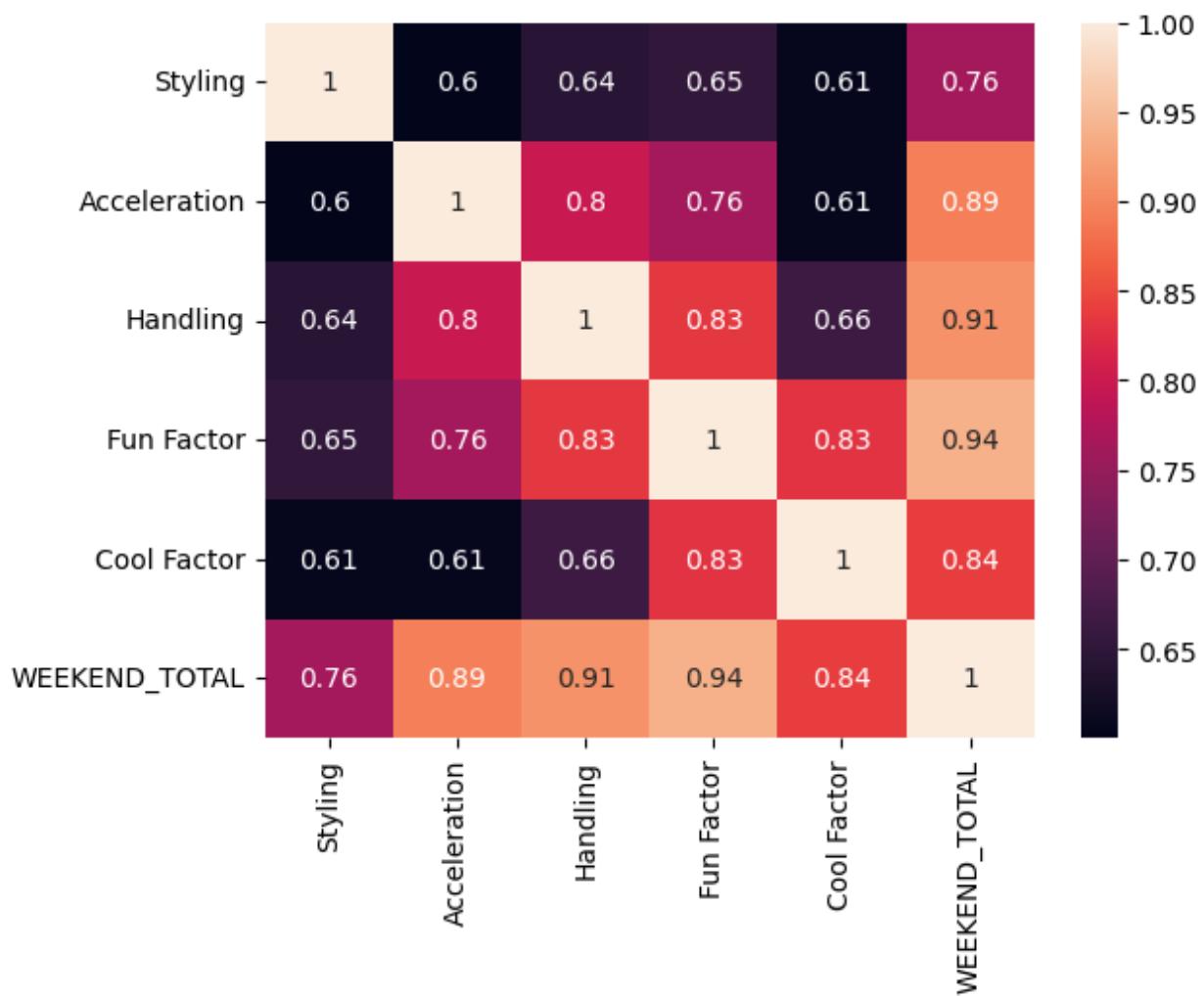
For starters, do you think Doug prefers weekend attributes or daily attributes?



The above diagram is a correlation matrix that reflects the correlations between daily, weekend and Doug scores across all the cars he's tested. Clearly, weekend attributes are highly correlated to doug score whilst the opposite can be said for daily attributes. A clear bias towards weekend attributes. This corroborates what he says on his website: "One thing to note: since I primarily review performance cars and special cars — and since my personal opinion is that

performance cars and special cars are the best cars — the DougScore is designed to be geared towards exciting cars". In my opinion, if you want a greater emphasis on daily attributes, you're better off taking the total daily score with more importance than weekend attributes. Meanwhile, if you're more vested into weekend attributes, the total weekend score should be your primary reference while doug score at least provides a secondary reference to bring some balance to your judgement with some day to day benefits.

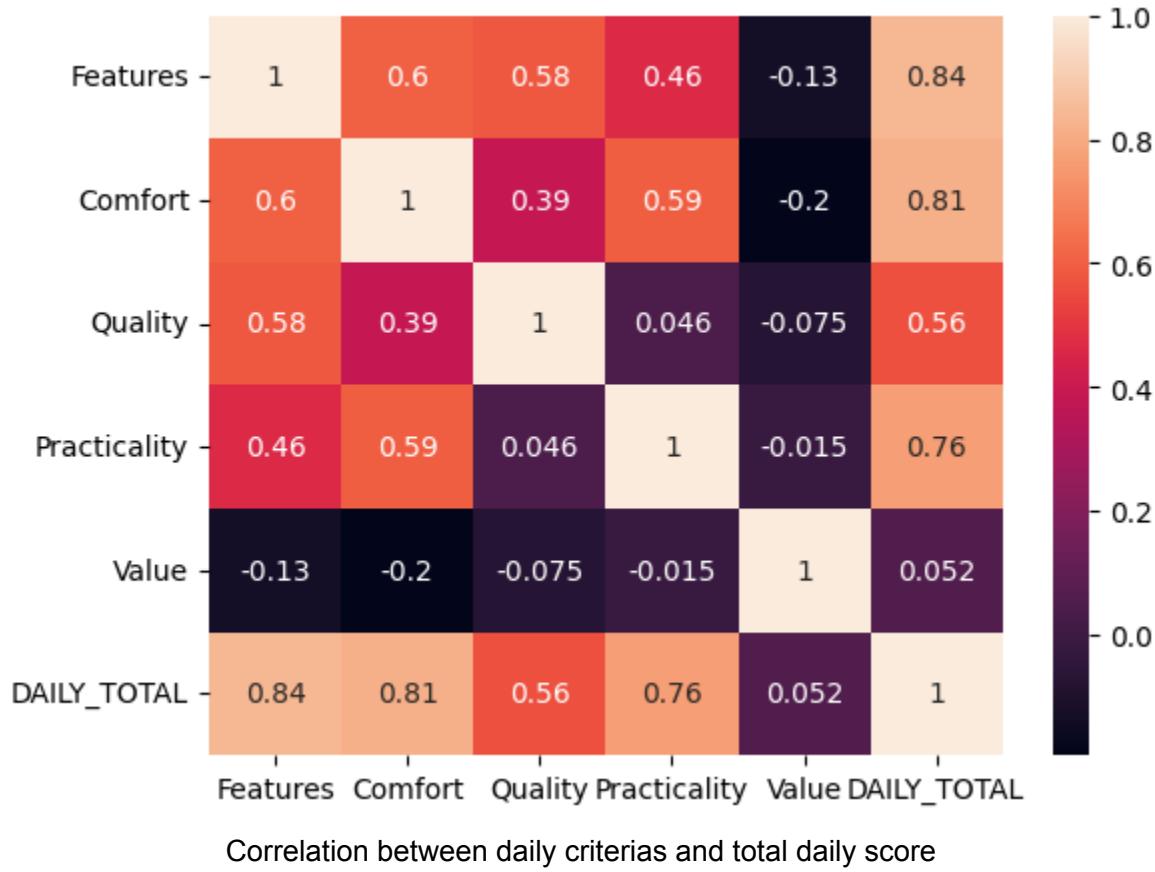
At the start of the report, I highlighted 5 weekend and daily criteria each. Do these reflect 10 unique enough aspects of the vehicle?



Correlation between weekend criterias and total weekend score

Fun, handling and acceleration contribute greatly to weekend score, whilst styling and cool factor contribute somewhat less. Pay attention to the correlations between the different weekend attributes; they're all at least 0.6! Intuitively speaking, acceleration and handling make up the performance of the car; unless the vehicles' a hot rod or a go kart, these 2 attributes are known to go hand in hand. We have 3 subjective attributes as well; styling, fun factor and cool factor.

Styling of a vehicle may be pleasing to one's eye while not necessarily to another. Even if intuitively it should be a criteria that's independent from acceleration and handling, I hypothesise that Doug's taste in style is typically found from performance cars. In a later section we'll investigate how fun and cool factors might be related to other individual components.

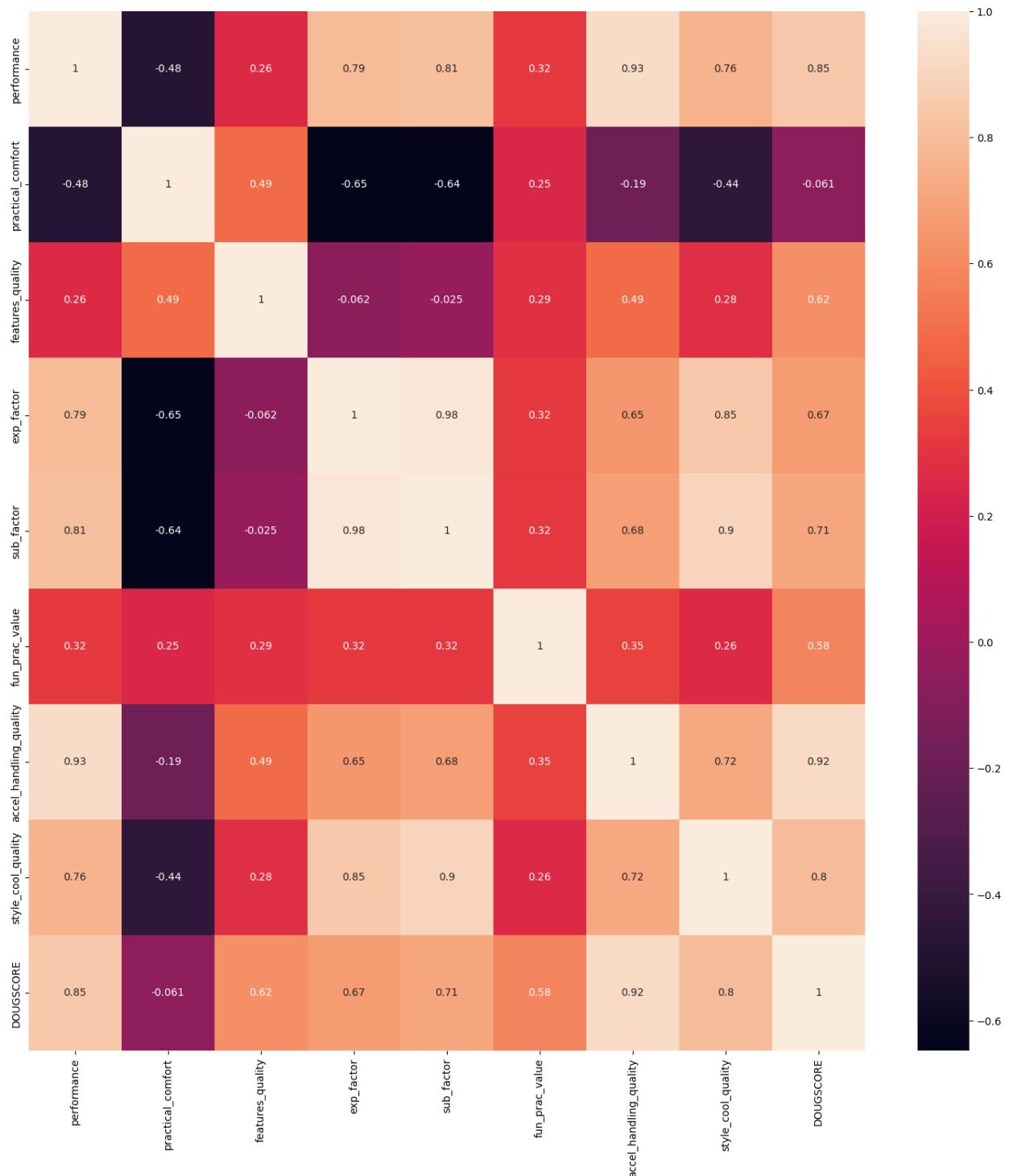


Visually you could see there's a lot less correlation between the individual daily criteria, but it's still rather significant since most are above 0.5. For similar reasons to weekend attributes, manufacturers likely built better daily vehicles that enhance the overall experience in these daily criteria.

Value is an interesting criteria as it's virtually uncorrelated with any attribute, including the daily total score. As Doug explains, this attribute reflects value for money. He claims that it considers all the 9 other attributes, but it seems ultimately the vehicle's current market value and level of depreciation determines it the most. Market value is associated with a lot of other external factors such as economy and very importantly branding, thus often it does not affect the other attributes and ultimately doesn't affect the doug score significantly.

Integration effects

Let us study the effect of integrating two or more criteria together on its relation with doug score.

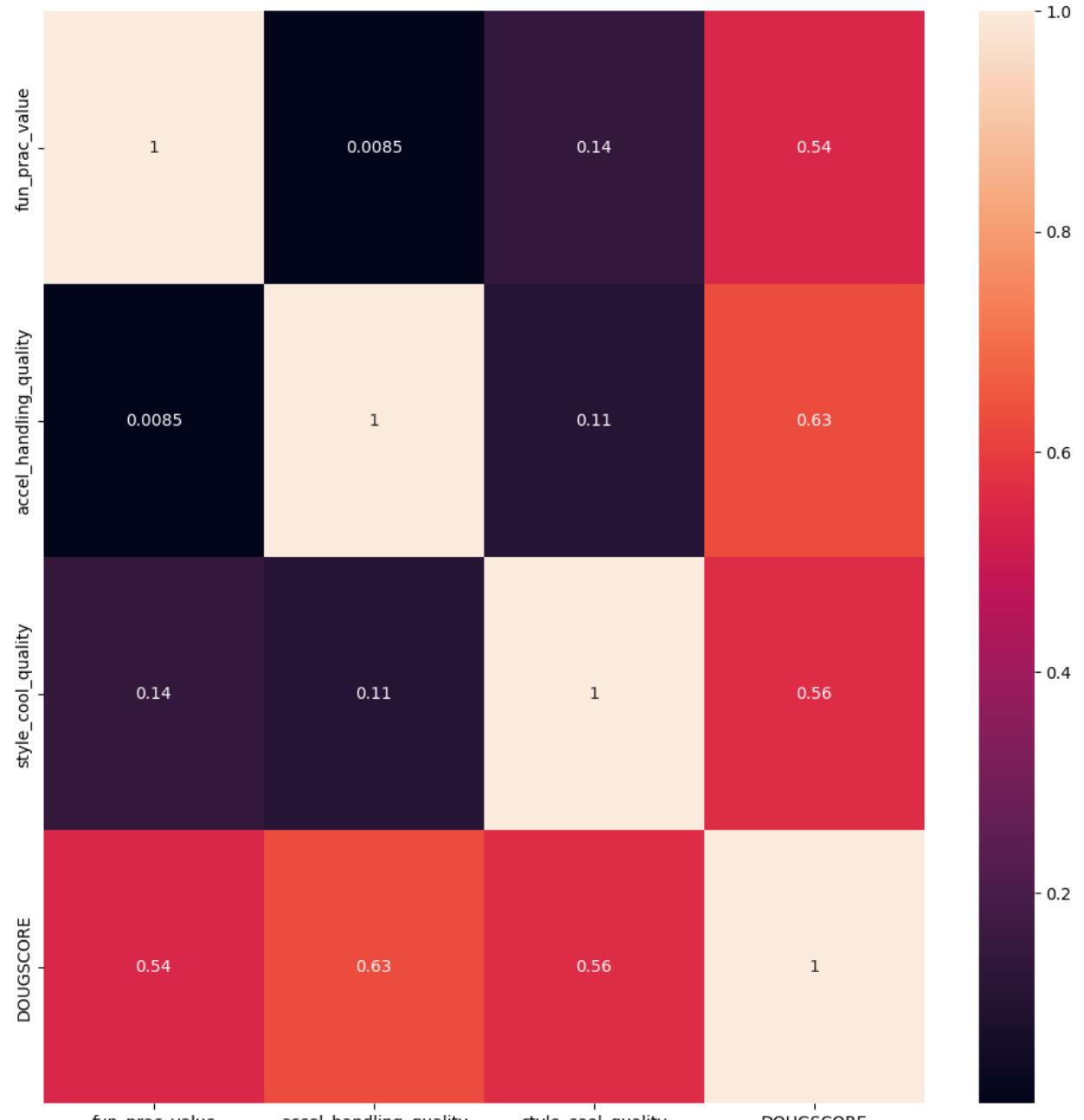


I'll be highlighting the significantly highly correlated integrated criteria. The top 3 are accel_handling_quality, performance and style_cool_quality. Accel_handling_quality, style_cool_quality and fun_prac_value are calculated similarly to key findings section a,b and c. Performance is just acceleration and handling summed and averaged, very similar to accel_handling_quality.

For the integrated attributes calculated from the key findings section, their mutual correlation is lower compared to the individual components. Summing these 3 values may be a better score for individuals who want a balanced assessment on daily usability and appeal and fun.

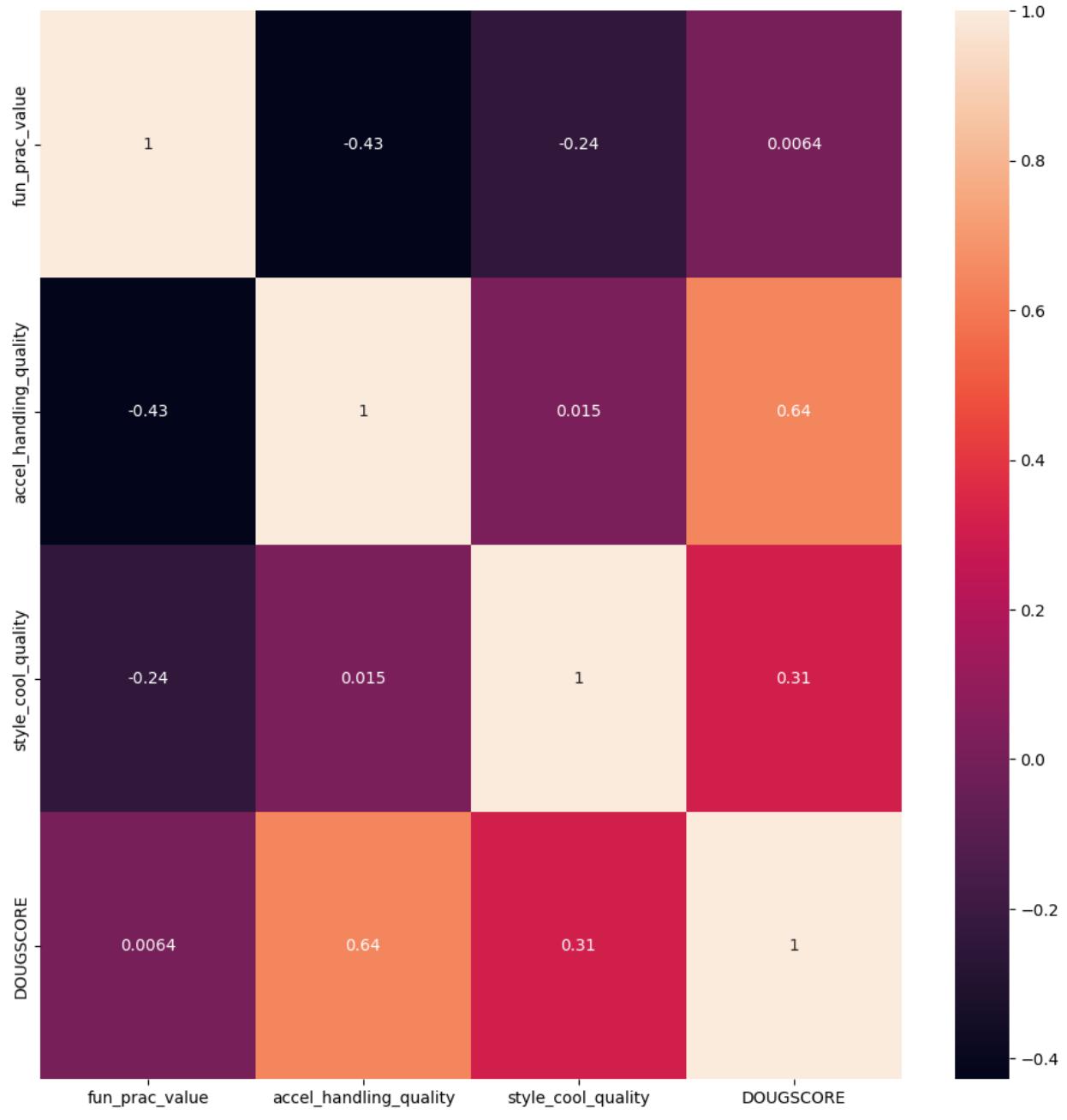
Non-linear Relationships

I've mentioned in the correlation analysis section that manufacturers might place emphasis on daily or weekly attributes on the basis of providing a holistic experience where multiple attributes are improved or had their corners cut together. To verify this, let's study the correlations at various Doug score levels using the 3 chosen integrated attributes.



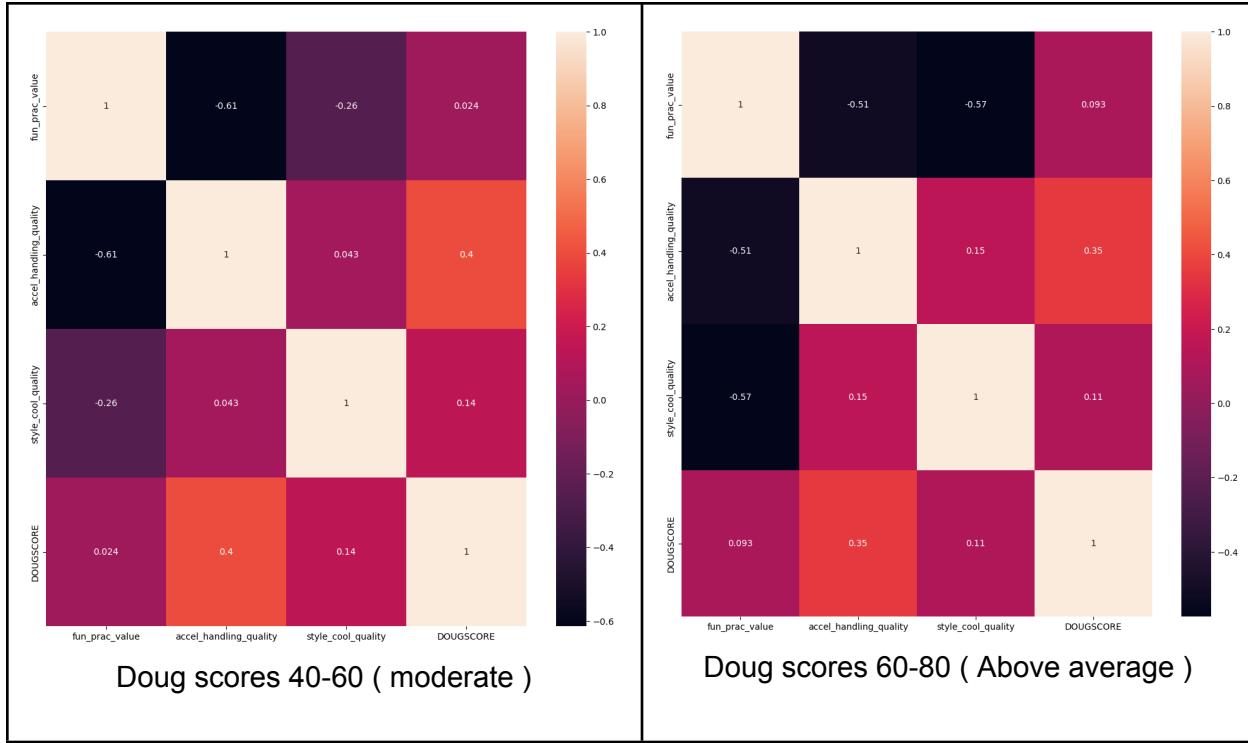
Doug scores 0-20 (poor)

Each integrated criteria has a correlation greater than 0.5, essentially bad in all key aspects.

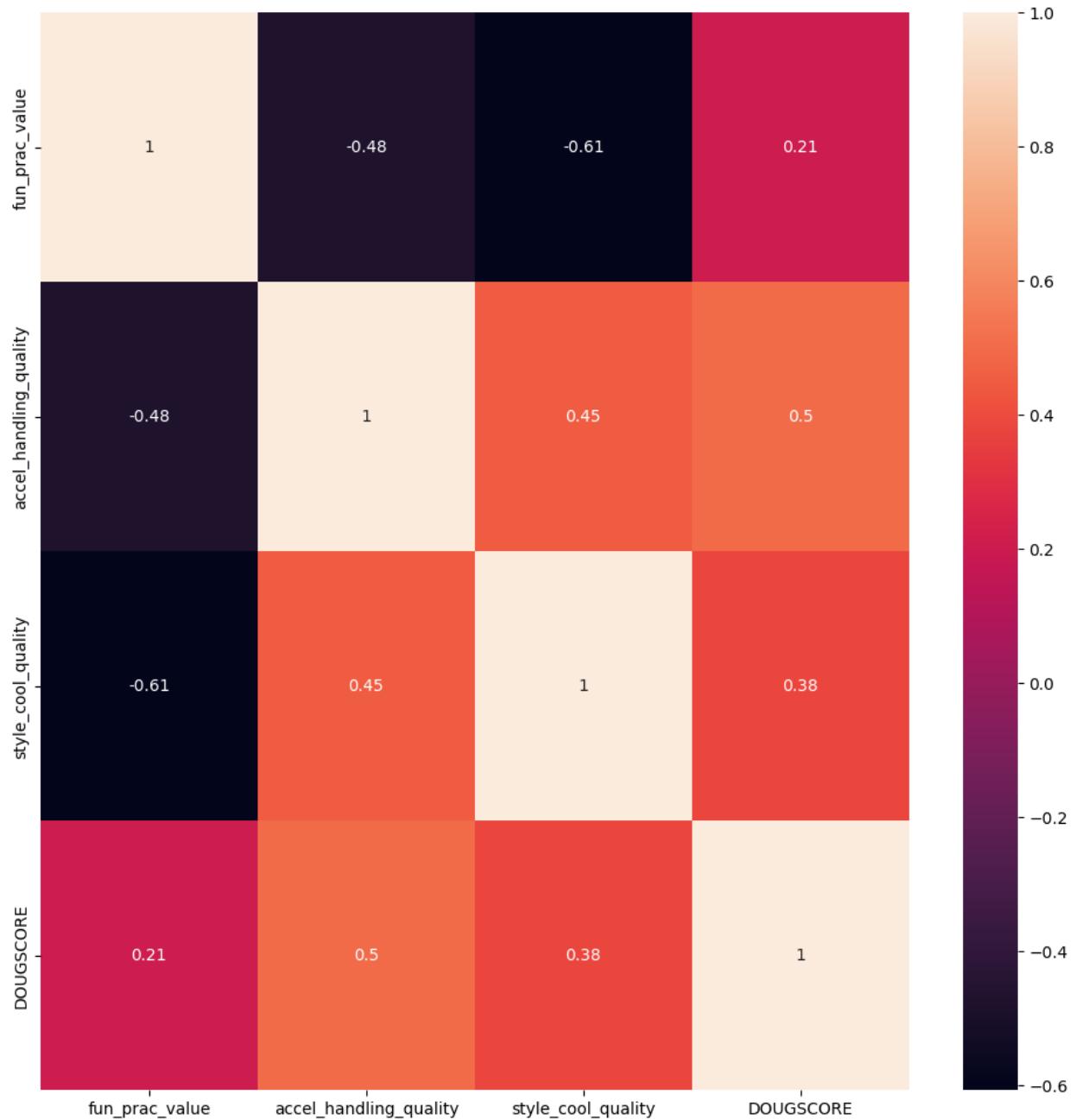


Doug scores 20-40 (below average)

Generally poor correlations, aside from accel_handling_quality. This means the majority of the time subpar acceleration, handling and quality collectively negatively affect doug scores most significantly.



Even less mutual correlation is observed. This implies that within the moderate and above average range, there's a more fairly distributed attribution of doug score to the three variables, though it's still significantly affected by accel_handling_quality. This distribution also shows that these vehicles are usually good in 1 or 2 of the categories, not all 3.



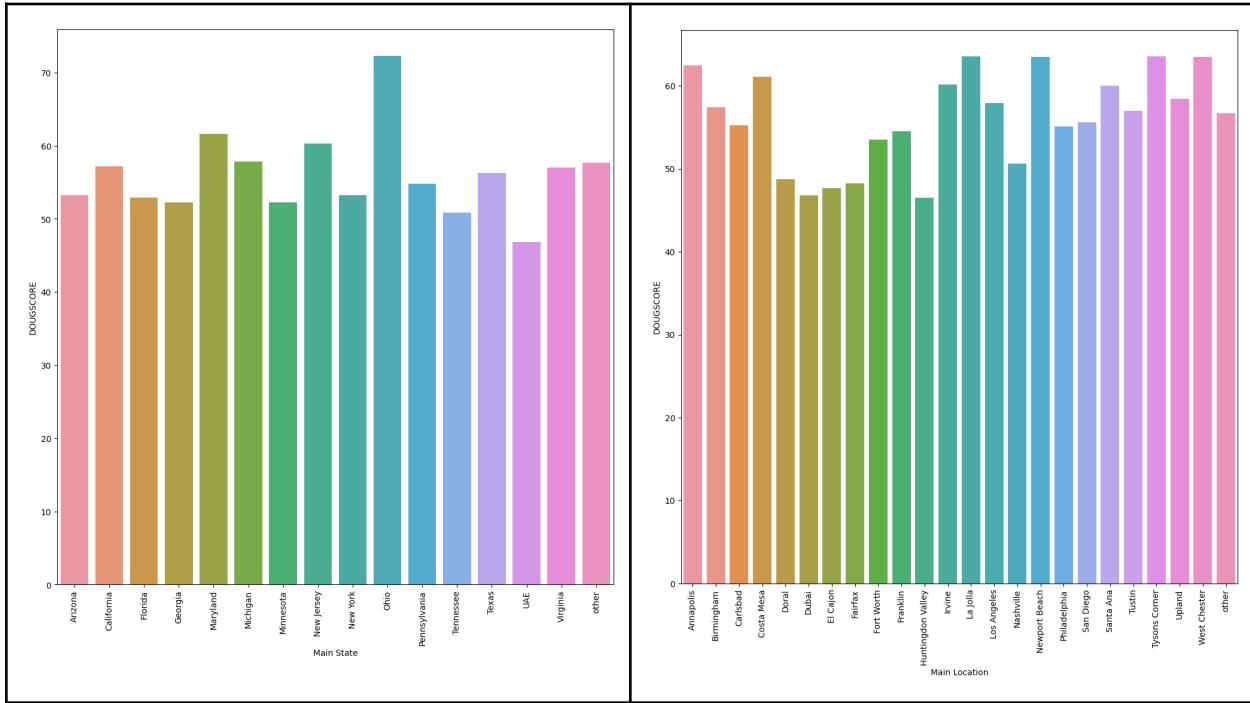
Doug scores 80-100 (Excellent)

There's slightly more mutual correlation. This distribution also shows that these vehicles are usually good in 2 or 3 of the categories, in particular fun_prac_value + accel_handling quality, accel_handling_quality + style_cool_quality, or all 3.

This section thus sheds some insight on how Doug analyses various levels of vehicles.

Additional relationships

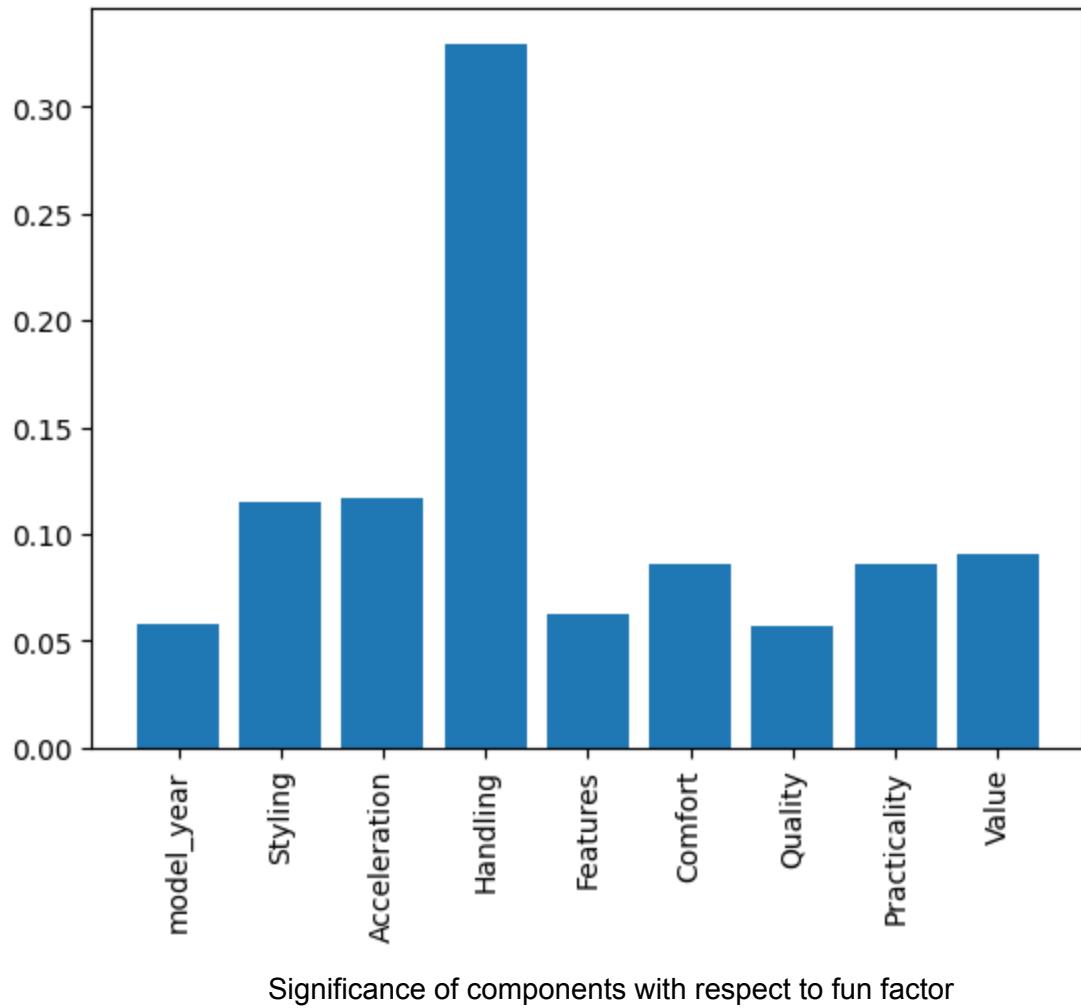
The Doug score distribution across various film locations and states can be visually represented as follows:

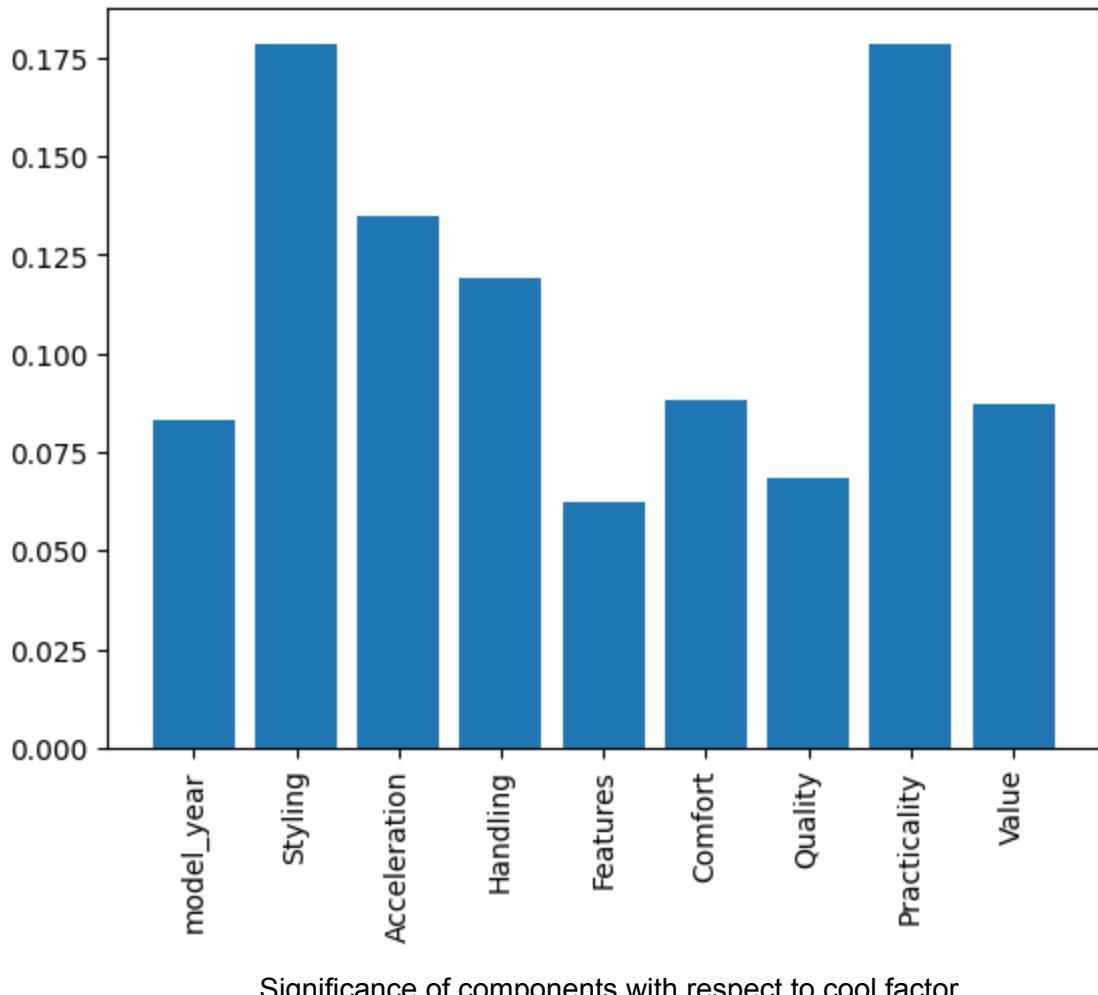


The left graph refers to state while the right graph refers to location. Generally speaking both are pretty uniformly distributed. For location, min is around 45 and max is around 65. The state of Ohio in particular scored significantly better, and turns out all 4 visits to Ohio had a super/hyper car being evaluated which definitely scored high on weekend attributes.

So rest assured, Doug hasn't been significantly affected by filming location nor state when scoring the vehicles 😊

I've also tried determining whether the more objective individual components can help determine how fun and cool factors are calculated, at least partially and if so to what extent.





Handling is very significant to the fun factor, which makes sense and generally is a widely-accepted criteria of fun amongst car enthusiasts.

However, the cool factor isn't such a straightforward non-linear relation. Doug mentioned the fun factor is more dependent on him, whilst the cool factor is about others turning heads not necessarily him. Therefore 43% accuracy reflects some aspect of the hit or miss nature of "cool". At the least, the most significant features are styling, acceleration, handling and practicality. The practicality aspect may be attributed to Doug's keenness towards pickups for their load capacity.

Conclusion

In summary I've shared some overall insights on the best cars in various general categories and elucidated how Doug's evaluations are like. So should you base your evaluation on Doug's

score? In terms of reliability of his evaluations statistically speaking it can be better, but Doug is transparent that there's a significant amount of subjectivity involved. I believe if your general persona fits Doug, e.g. living in suburbs with lots of open roads, you'll definitely benefit greatly directly from Doug's score. Otherwise, it'll be best to pick out the objective individual components you're more keen on and/or fits your persona the best!

Happy car shopping!