

# Car Fuel Analysis

by  
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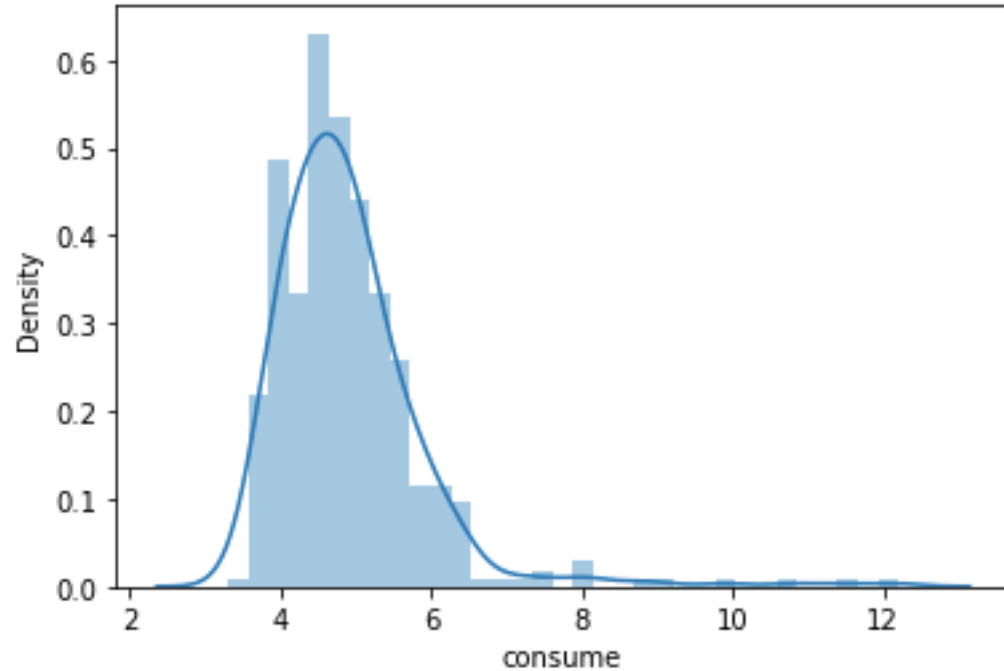
## ❑ Questions:

- As a car fuel option, is SP98 worth the hype over E10?
- Is gas consumption (L/100 km) predictable?

## ❑ Data:

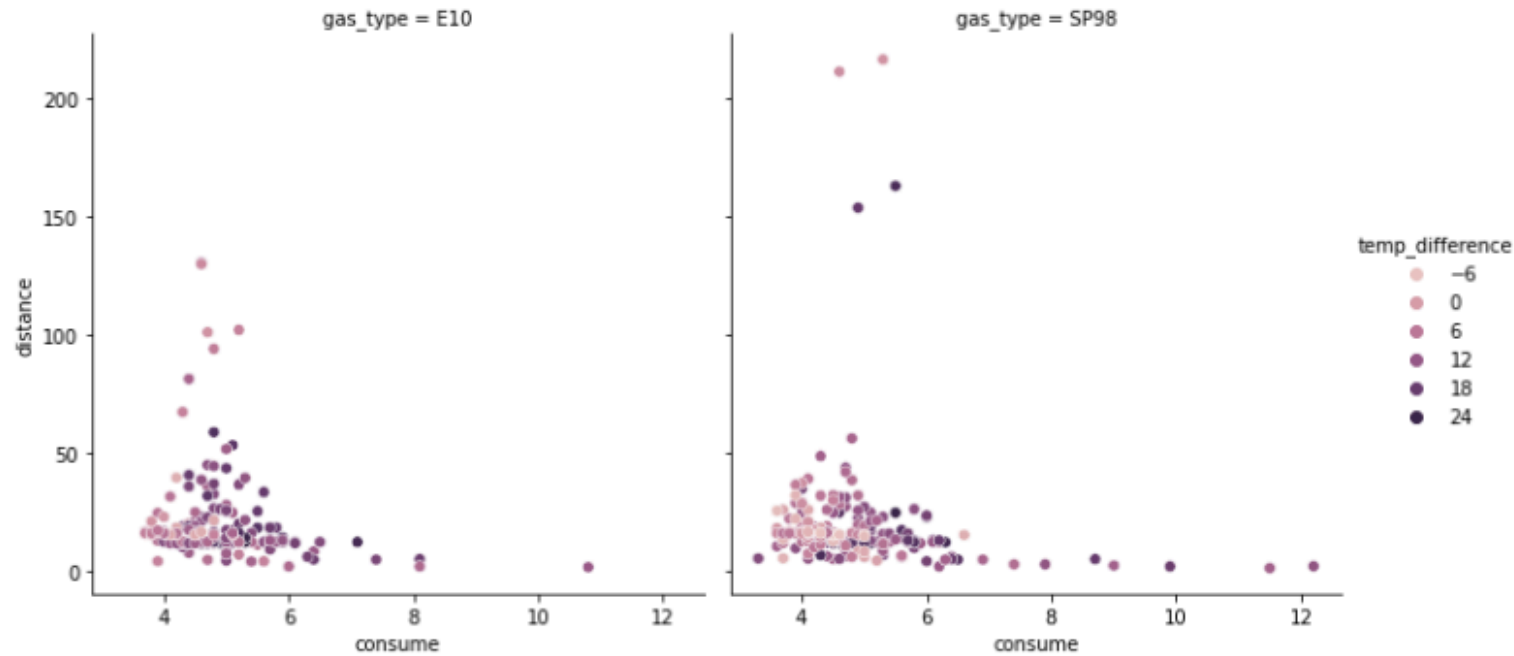
- Car fuel dataset from <https://www.kaggle.com/datasets/andreas/car-consume>

# Does gas consumption of a car differ between gas types?



- Average gas consumption is  $\sim 5$  L/100 km
- Two sided hypothesis test suggests that the average E10 consumed by the car is NOT significantly different from its average consumption of SP98!

# Temperature difference matters

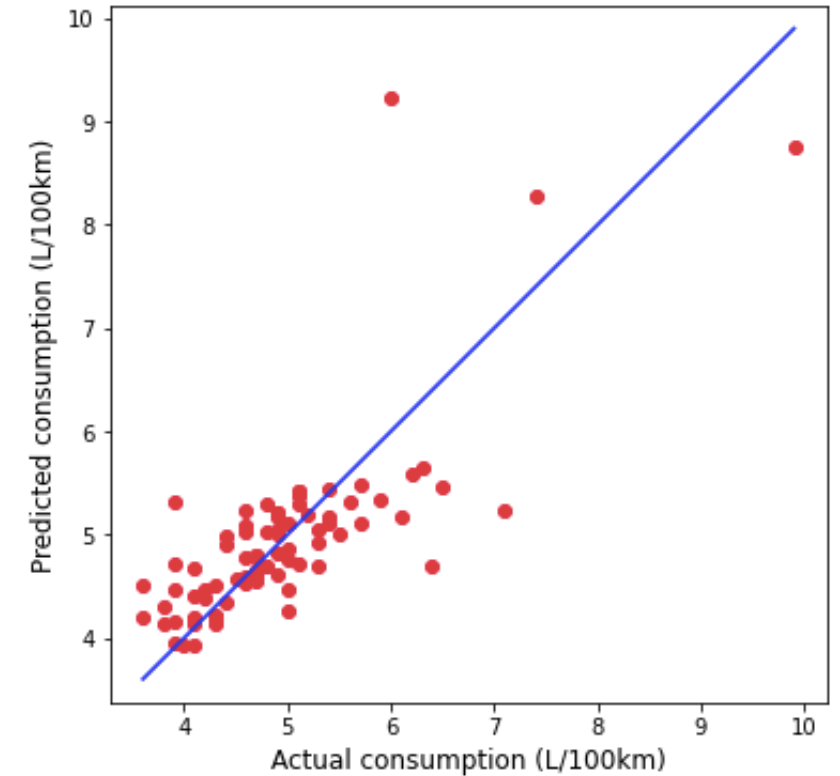


- In general, the colder the weather, the more the gas consumption is. This makes sense because the engine will need more gas to retain a comfortable temperature inside the car in colder weather.
- Interestingly, the case where the outside temperature is more than the inside (in spring and summer), the car consumes the least gas.

# Predicting gas consumption

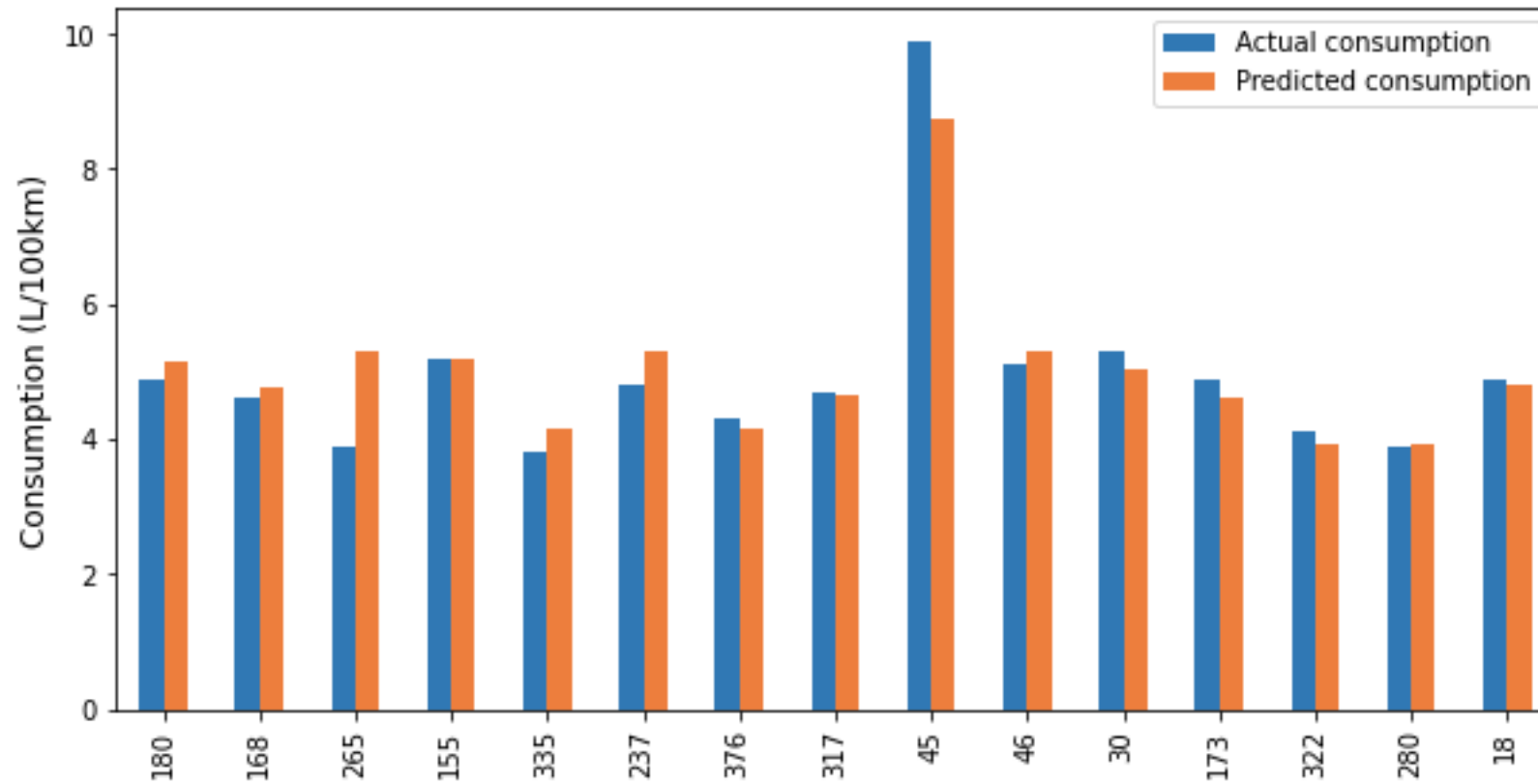
Predicting the gas consumption is possible based on features such as

- Distance
- Speed
- Temperature inside the car
- Temperature outside
- Gas type
- Whether the AC is on
- Weather conditions



# Predicting gas consumption

- Actual vs. Predicted gross earning for 15 random movies



# Conclusions

- Gas type does not significantly change the average fuel consumption by a car.
- For financial reasons, the business can switch to using E10 instead of SP98 and save money.
- Outside temperature is more of a determinant on how much gas is consumed.
- Gas consumption is predictable

# Future Work

- Scrape data to enrich the data
- More feature engineering efforts



Thank you!

- Please feel free to contact me for more clarification and any questions that you may have.
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