

# Project 2 – Car Evaluation

MTH 161 – Fall 2024

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## Part 1: choose a dataset and propose a question

### Due Nov. 15th

The first step is to think about and choose a potential question or topic that you're interested in and then find a dataset that will help you investigate your question.

The dataset you choose should

- Have at least 100 observations
- Have at least 5 columns (variables)

You must credit a source for your data and provide a link to the source.

After you identify a dataset to examine, provide enough background on the dataset for your reader to understand the context for your research question. This might include a snippet of data (using your favorite code), a codebook explaining what the variables are, and/or a calculation that has pointed you to a question about the data that you find compelling: whatever you feel is needed to help frame your research question. Finally, make sure your research question is articulated precisely with clear reference to the variable(s) or parameter(s) of interest. Past AEs, labs, and the first project all contain examples of carefully stated research questions.

#### Note

The data set is provided by UC Irvine which attempts to evaluate cars by testing constructive induction and structure discovery methods. The model evaluates cars according to the following concept structure: car acceptability (target variable), overall price, buying price, price of maintenance, technical characteristics, comfort, number of doors, capacity in terms of persons to carry, the size of luggage boot, and estimated safety of the car. During project 2, I aim to find out how car acceptability and comfort of a car affect its

overall evaluation.

Codebook buying - buying price

maint - price of the maintenance

doors - number of doors

persons - capacity in terms of persons to carry

lug\_boot - the size of luggage boot

safety - estimated safety of the car

class(target) - evaluation level (unacceptable, acceptable, good, very good)