

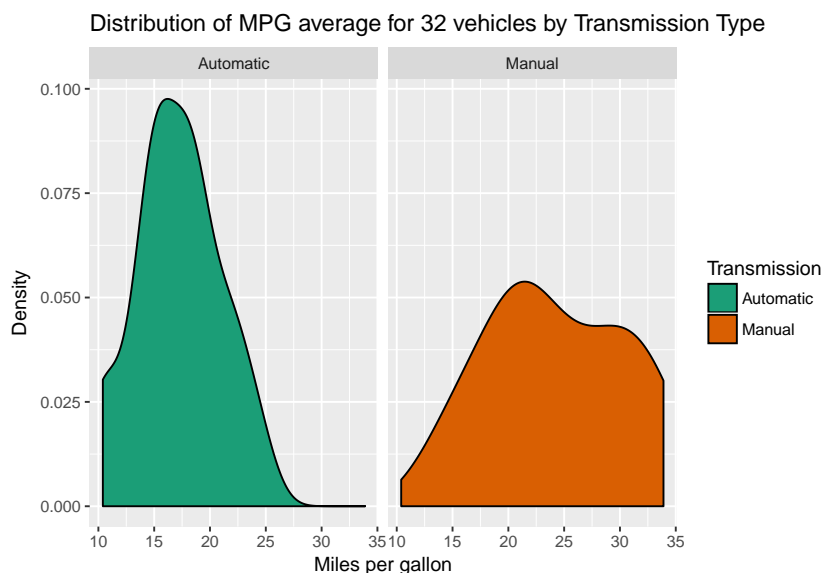
# The Effect of Transmission Type on Automobile Fuel Consumption

*Jon Cusick*

Main Questions:

1. Is automatic or manual transmission better for mpg?
2. Quantify the difference between the two types of transmission.

This analysis will make use of the `mtcars` (ADD LINK) dataset, a collection of fuel usage for 32 cars, each of which is a 1973-1974 model. An initial exploratory plot shows a high collection of automatic cars at lower MPG levels while manual vehicles are distributed somewhat more evenly at mid to high levels of MPG.



A linear regression model was fit without an intercept to the dataset for better intepretability of both transmission categories.

term	estimate	std.error	statistic	p.value
TransmissionAutomatic	17.14737	1.124602	15.24749	0
TransmissionManual	24.39231	1.359578	17.94109	0