

MPG Analytics

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MPG Analysis

Using a online dashboard will eliminate the need for distributing files and reduces the potential of errors in replication. This app is a proof of concept for a simple scenario exemplifying the relationship between car weight, number of cylinders and MPG. All inputs can be adjusted and changed. All output are fully reactive.

MPG Analysis

- Adjustable Inputs:
 - Input 1 = Engine displacement (default 300)
 - Input 2 = Number of cylinders (default 6)
- Checkbox:
 - Linear regression model (show/hide)
- Results:
 - Linear regression trend analysis of weight to MPG identifying number of cylinders

MPG Analysis - R Code

```
library(dplyr)

carmodel <- filter(mtcars, mtcars$disp <= input$slider1$,
                   mtcars$cyl <= input$slider2)

plot(carmodel$mpg, carmodel$disp, ylab = "Engine Disp",
     xlab = "MPG", pch = 16, col = carmodel$cyl)

modell1 <- lm(disp ~ mpg, data = carmodel)
abline(modell1, col = "blue", lwd = 2, lty = 3)

legend(30, 165, c("8 Cylinders", "6 Cylinders", "4 Cylinders"),
      pch = 16, col = c("grey", "darkmagenta", "dodgerblue"),
      bty = "n", cex = 1 )
```

MPG Analysis - Graph

