STAT XXX HW 1

Your Name Here

2018-09-06

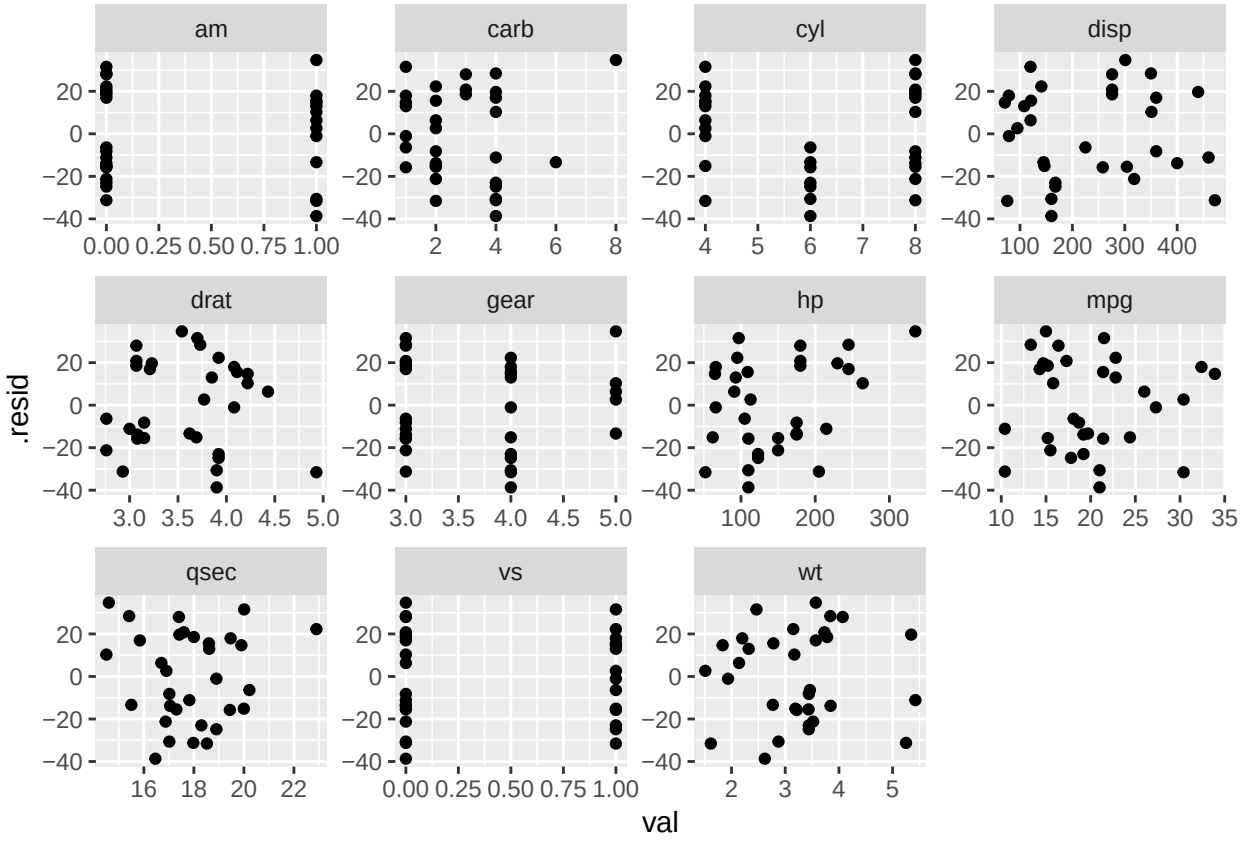
Notes on the YAML header

- Be sure to change the title and author fields
- The date is automatically set to the current day when knitting
- The `header-includes` portion loads a personal sheet of LaTeX macros. I recommend making one of these as well as it can greatly speed up the time to input math. See my personal macro file `hayesmacros.sty` as a starting point. If you aren't going to load a LaTeXmacro file, remove those lines.
  - `hayesmacros.sty` needs to be in the same folder as this file

Problem 1

Your homework goes here

Briefly, some of the custom latex macros: $y = \beta x + \epsilon$. Also, some code:



Yet more text, and another code section:

	.rownames	hp	mpg	cyl	disp

	.rownames	hp	mpg	cyl	disp
Mazda RX4	Mazda RX4	110	21.0	6	160.0
Mazda RX4 Wag	Mazda RX4 Wag	110	21.0	6	160.0
Datsun 710	Datsun 710	93	22.8	4	108.0
Hornet 4 Drive	Hornet 4 Drive	110	21.4	6	258.0
Hornet Sportabout	Hornet Sportabout	175	18.7	8	360.0
Valiant	Valiant	105	18.1	6	225.0
Duster 360	Duster 360	245	14.3	8	360.0
Merc 240D	Merc 240D	62	24.4	4	146.7
Merc 230	Merc 230	95	22.8	4	140.8
Merc 280	Merc 280	123	19.2	6	167.6
Merc 280C	Merc 280C	123	17.8	6	167.6
Merc 450SE	Merc 450SE	180	16.4	8	275.8
Merc 450SL	Merc 450SL	180	17.3	8	275.8
Merc 450SLC	Merc 450SLC	180	15.2	8	275.8
Cadillac Fleetwood	Cadillac Fleetwood	205	10.4	8	472.0
Lincoln Continental	Lincoln Continental	215	10.4	8	460.0
Chrysler Imperial	Chrysler Imperial	230	14.7	8	440.0
Fiat 128	Fiat 128	66	32.4	4	78.7
Honda Civic	Honda Civic	52	30.4	4	75.7
Toyota Corolla	Toyota Corolla	65	33.9	4	71.1
Toyota Corona	Toyota Corona	97	21.5	4	120.1
Dodge Challenger	Dodge Challenger	150	15.5	8	318.0
AMC Javelin	AMC Javelin	150	15.2	8	304.0
Camaro Z28	Camaro Z28	245	13.3	8	350.0
Pontiac Firebird	Pontiac Firebird	175	19.2	8	400.0
Fiat X1-9	Fiat X1-9	66	27.3	4	79.0
Porsche 914-2	Porsche 914-2	91	26.0	4	120.3
Lotus Europa	Lotus Europa	113	30.4	4	95.1
Ford Pantera L	Ford Pantera L	264	15.8	8	351.0
Ferrari Dino	Ferrari Dino	175	19.7	6	145.0
Maserati Bora	Maserati Bora	335	15.0	8	301.0
Volvo 142E	Volvo 142E	109	21.4	4	121.0

Code

```
## ----include = FALSE----------------------------------------------------------
knitr::opts_chunk$set(
  echo = FALSE,           # don't show code
  warning = FALSE,        # don't show warnings
  message = FALSE,        # don't show messages (less serious warnings)
  cache = FALSE,          # set to TRUE to save results from last compilation
  fig.align = "center"    # center figures
)

library(tidyverse)        # load libraries you always use here
library(tidymodels)
library(knitr)            # require for purl function to create code appendix
```

```r
library(hayeslib)         # i highly recommend creating a personal R package
                          # with code you use a lot and loading it here as well

set.seed(27)              # make random results reproducible

this_file <- "template.Rmd"  # used to automatically generate code appendix

## ------------------------------------------------------------------------
fit <- lm(hp ~ ., mtcars)
au <- broom::augment(fit)

au %>%
  gather(x, val, -contains(".")) %>%
  ggplot(aes(val, .resid)) +
  geom_point() +
  facet_wrap(~x, scales = "free")

## ------------------------------------------------------------------------
kable(select(au, 1:5))

## ----code = readLines(purl(this_file, documentation = 1)), echo = T, eval = F----
## # this R markdown chunk generates a code appendix
```