

STAT440 Project Appendix

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April 20, 2018

Visual Tests

Here, we'll perform some visual tests allowing the user to ensure that `stat440pkg` is returning sane results.

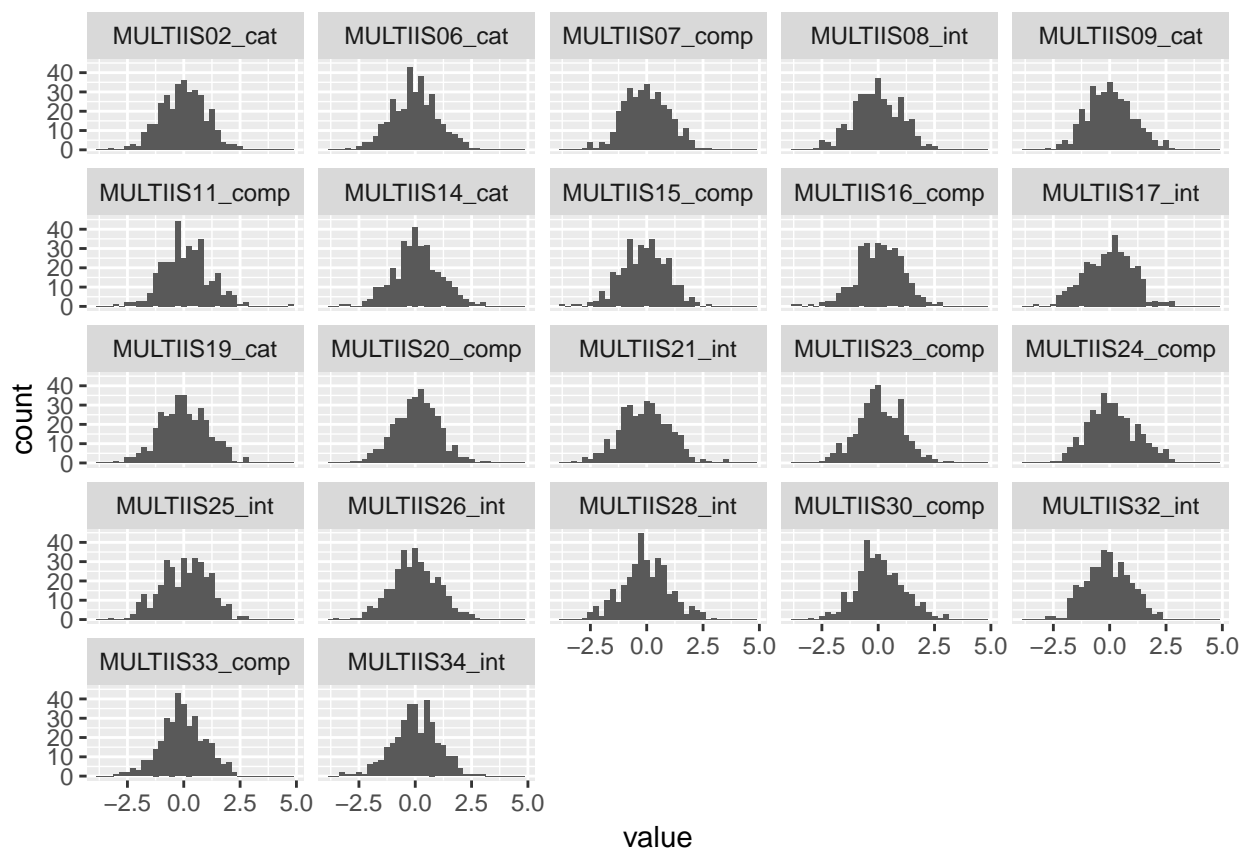
`gen.imp.resp`

Let's make sure `gen.imp.resp` is returning somewhat normally-distributed data.

```
library(stat440pkg)
library(tidyr)
library(ggplot2)

imp.resp <- gen.imp.resp(data = multiis, num.iter = 5)
gathered.data <- gather(imp.resp)
p <- ggplot(gathered.data) +
  geom_histogram(aes(x = value), binwidth = 0.25) +
  facet_wrap(~ key)

plot(p)
```



gen.latent.vars

Let's make sure `gen.latent.vars` is returning somewhat normally-distributed data.

```
grp.indicator <- sapply(names(multiis), FUN =  
  function(x){strsplit(x, split = "_")[[1]][2]})  
  
lv <- gen.latent.vars(data = multiis, grp.indicator = grp.indicator, num.iter = 5)  
  
gathered.data <- gather(lv)  
p <- ggplot(gathered.data) +  
  geom_histogram(aes(x = value), binwidth = 0.25) +  
  facet_wrap(~ key)  
  
plot(p)
```

