spud

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```r
df = read.csv("trial.csv")    #This file has some dummy data in which femail participants who see a feed
                              # reduce their beef consumption next week by one meail, wiht probablity of

#rename some columns
# pre_  is weekly consumption before they watch the video
# post_  is weekly plan for next week

names(df)[names(df) == 'q10_5_text'] <- 'pre_beef'
names(df)[names(df) == 'q11_5_text'] <- 'post_beef'
names(df)[names(df) == 'q10_6_text'] <- 'pre_pork'
names(df)[names(df) == 'q11_6_text'] <- 'post_pork'
names(df)[names(df) == 'q9'] <- 'sex'
summary(df)
```

```
##    mturkcode              q1              sex          q10_1_text
##  Min.   :3.638e+07   Min.   :15.00   Female:205   Min.   : 0.000
##  1st Qu.:2.854e+09   1st Qu.:17.00   Male  :195   1st Qu.: 2.000
##  Median :5.222e+09   Median :20.00                Median : 5.000
##  Mean   :5.109e+09   Mean   :20.01                Mean   : 5.125
##  3rd Qu.:7.299e+09   3rd Qu.:23.00                3rd Qu.: 8.000
##  Max.   :9.993e+09   Max.   :25.00                Max.   :10.000
##    q10_2_text        q10_3_text       q10_4_text         pre_beef
##  Min.   : 0.000   Min.   : 0.00   Min.   : 0.000   Min.   :0.000
##  1st Qu.: 2.000   1st Qu.: 2.00   1st Qu.: 2.000   1st Qu.:4.000
##  Median : 5.000   Median : 5.00   Median : 5.000   Median :4.000
##  Mean   : 4.973   Mean   : 5.01   Mean   : 5.037   Mean   :4.125
##  3rd Qu.: 8.000   3rd Qu.: 8.00   3rd Qu.: 8.000   3rd Qu.:5.000
##  Max.   :10.000   Max.   :10.00   Max.   :10.000   Max.   :6.000
##    pre_pork                                       q8          q11_1_text
##  Min.   : 0.000   Use of animals in agriculture   :267   Min.   : 0.000
##  1st Qu.: 1.000   Use of irrigation in agriculture:133   1st Qu.: 3.000
##  Median : 4.000                                          Median : 5.000
##  Mean   : 4.275                                          Mean   : 5.178
##  3rd Qu.: 7.000                                          3rd Qu.: 8.000
##  Max.   :10.000                                          Max.   :10.000
##    q11_2_text        q11_3_text       q11_4_text         post_beef
##  Min.   : 0.000   Min.   : 0.000   Min.   : 0.00   Min.   :0.000
##  1st Qu.: 2.000   1st Qu.: 2.000   1st Qu.: 2.00   1st Qu.:3.000
##  Median : 5.000   Median : 5.000   Median : 5.00   Median :4.000
##  Mean   : 5.027   Mean   : 4.832   Mean   : 5.02   Mean   :4.035
##  3rd Qu.: 8.000   3rd Qu.: 8.000   3rd Qu.: 8.00   3rd Qu.:5.000
##  Max.   :10.000   Max.   :10.000   Max.   :10.00   Max.   :7.000
##    post_pork       video_type attention_correct
##  Min.   : 0.000   F:134       true:400
```

```
##   1st Qu.: 1.000    I:133
##   Median : 4.000    P:133
##   Mean    : 4.332
##   3rd Qu.: 7.000
##   Max.    :10.000
```

```r
# remember, video_type:   "F" => feedlot, "P" => Pasture, "I" => Irrigation
# Create a new column "vegetarian" for those who never eat meat before treatment
#mean(df$pre_beef)
#mean(df$post_beef)
#mean(df$post_beef[df$sex=="Male"])
#mean(df$post_beef[df$sex=="Female"])
#mean(df$post_beef[df$sex=="Female" & df$video_type=="F"])
#mean(df$post_beef[df$sex=="Female" & df$video_type=="P"])
#mean(df$post_beef[df$sex=="Female" & df$video_type=="I"])


# try a simple regression; set male and Irrigation video as reference levels for those factors
df$sex <-relevel(df$sex, ref = "Male")
df$video_type <-relevel(df$video_type, ref = "I")
df$vegetarian <- (df$pre_beef == 0) &(df$pre_pork == 0)
model1 = lm( post_beef ~ pre_beef + vegetarian + factor(sex)*factor(video_type)*vegetarian, data=df)
summary(model1)
```

```
##
## Call:
## lm(formula = post_beef ~ pre_beef + vegetarian + factor(sex) *
##      factor(video_type) * vegetarian, data = df)
##
## Residuals:
##      Min      1Q  Median      3Q     Max
## -1.5020 -0.9217  0.0000  0.9746  1.5313
##
## Coefficients:
##                                                            Estimate Std. Error
## (Intercept)                                                0.074835   0.270462
## pre_beef                                                   0.983338   0.054949
## vegetarianTRUE                                            -0.074835   0.388207
## factor(sex)Female                                          0.017222   0.153933
## factor(video_type)F                                        0.001865   0.152848
## factor(video_type)P                                       -0.015378   0.161636
## factor(sex)Female:factor(video_type)F                     -0.525298   0.215870
## factor(sex)Female:factor(video_type)P                     -0.088293   0.218438
## vegetarianTRUE:factor(sex)Female                          -0.017222   0.466458
## vegetarianTRUE:factor(video_type)F                        -0.001865   0.447919
## vegetarianTRUE:factor(video_type)P                         0.015378   0.436956
## vegetarianTRUE:factor(sex)Female:factor(video_type)F       0.525298   0.692676
## vegetarianTRUE:factor(sex)Female:factor(video_type)P       0.088293   0.684435
##                                                            t value Pr(>|t|)
## (Intercept)                                                  0.277   0.7822
## pre_beef                                                    17.896   <2e-16 ***
## vegetarianTRUE                                              -0.193   0.8472
## factor(sex)Female                                            0.112   0.9110
## factor(video_type)F                                          0.012   0.9903
## factor(video_type)P                                         -0.095   0.9243
```

```
## factor(sex)Female:factor(video_type)F                        -2.433   0.0154 *
## factor(sex)Female:factor(video_type)P                        -0.404   0.6863
## vegetarianTRUE:factor(sex)Female                             -0.037   0.9706
## vegetarianTRUE:factor(video_type)F                           -0.004   0.9967
## vegetarianTRUE:factor(video_type)P                            0.035   0.9719
## vegetarianTRUE:factor(sex)Female:factor(video_type)F          0.758   0.4487
## vegetarianTRUE:factor(sex)Female:factor(video_type)P          0.129   0.8974
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8355 on 387 degrees of freedom
## Multiple R-squared:  0.7803, Adjusted R-squared:  0.7735
## F-statistic: 114.5 on 12 and 387 DF,  p-value: < 2.2e-16
```

Nicer output courtesy of stargazer

```
stargazer(model1, type="latex", header=FALSE)
```

	Dependent variable:
	post_beef
pre_beef	0.983***
	(0.055)
vegetarian	−0.075
	(0.388)
factor(sex)Female	0.017
	(0.154)
factor(video_type)F	0.002
	(0.153)
factor(video_type)P	−0.015
	(0.162)
factor(sex)Female:factor(video_type)F	−0.525**
	(0.216)
factor(sex)Female:factor(video_type)P	−0.088
	(0.218)
vegetarianTRUE:factor(sex)Female	−0.017
	(0.466)
vegetarianTRUE:factor(video_type)F	−0.002
	(0.448)
vegetarianTRUE:factor(video_type)P	0.015
	(0.437)
vegetarianTRUE:factor(sex)Female:factor(video_type)F	0.525
	(0.693)
vegetarianTRUE:factor(sex)Female:factor(video_type)P	0.088
	(0.684)
Constant	0.075
	(0.270)
Observations	400
R^2	0.780
Adjusted R^2	0.773
Residual Std. Error	0.835 (df = 387)
F Statistic	114.541*** (df = 12; 387)
Note:	*p<0.1; **p<0.05; ***p<0.01