

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:

```
df = read.csv("trial.csv")
#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

# remember, video_type: "F" => feedlot, "P" => Pasture, "I" => Irrigation
# Create a new column "vegetarian" for those who never eat meat before or after treatment
mean(df$pre_beef)

## [1] 4.125

mean(df$post_beef)

## [1] 4.035

mean(df$post_beef[df$sex=="Male"])

## [1] 4.035897

mean(df$post_beef[df$sex=="Female"])

## [1] 4.034146

mean(df$post_beef[df$sex=="Female" & df$video_type=="F"])

## [1] 3.796875

mean(df$post_beef[df$sex=="Female" & df$video_type=="P"])

## [1] 4.135135

mean(df$post_beef[df$sex=="Female" & df$video_type=="I"])

## [1] 4.149254

# 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$post_beef == 0) & (df$pre_pork == 0) & (df$post_pork == 0)
modell1 = lm( post_beef ~ pre_beef + vegetarian + factor(sex)*factor(video_type)*vegetarian, data=df)
summary(modell1)

##
## 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

```