Render PDF tables

2023-04-24

library(tidyverse)  
Sys.setenv(R\_CONFIG\_ACTIVE = Sys.info()["nodename"])  
print(Sys.info()["nodename"])

## nodename   
## "Benjamins-MacBook-Pro-3.local"

library(stargazer)

## Warning: package 'stargazer' was built under R version 4.0.5

##   
## Please cite as:

## Hlavac, Marek (2022). stargazer: Well-Formatted Regression and Summary Statistics Tables.

## R package version 5.2.3. https://CRAN.R-project.org/package=stargazer

library(tidyverse)  
  
dropbox\_dir <- config::get("dev\_analysis\_data\_dir")  
  
#load(paste0(dropbox\_dir,"/sst\_paper\_generation.Rdata"))

# trial\_neural\_behav\_roi\_stop<-trial\_neural\_behav\_roi %>% filter(trial\_n>50 & condition %in% c("CorrectStop","FailedStop"))  
#   
# trial\_neural\_behav\_roi\_stop<- trial\_neural\_behav\_roi\_stop %>%   
# mutate(P\_stop\_trial\_change\_z\_stop = (P\_stop\_trial\_change-mean(P\_stop\_trial\_change))/sd(P\_stop\_trial\_change),  
# post\_pre\_rt\_change\_z\_stop = (post\_pre\_rt\_change\_z-mean(post\_pre\_rt\_change\_z))/sd(post\_pre\_rt\_change\_z)  
# )  
#   
# model\_full\_effects <- lme4::lmer(  
# med\_post\_trial\_z ~ trial\_n\_s+ condition + P\_stop\_trial\_change+ post\_pre\_rt\_change + (1 +post\_pre\_rt\_change + P\_stop\_trial\_change | subid),  
# trial\_neural\_behav\_roi %>% filter(trial\_n>50 & condition %in% c("CorrectStop","FailedStop"))  
# )  
# summary(model\_full\_effects)  
#   
# model\_no\_rt<- lme4::lmer(  
# med\_post\_trial\_z ~ trial\_n\_s+ condition + P\_stop\_trial\_change + (1 +post\_pre\_rt\_change + P\_stop\_trial\_change | subid),  
# trial\_neural\_behav\_roi %>% filter(trial\_n>50 & condition %in% c("CorrectStop","FailedStop"))  
# )  
#   
# anova(model\_full\_effects,model\_no\_rt)  
# model\_no\_p\_stop<- lme4::lmer(  
# med\_post\_trial\_z ~ trial\_n\_s+ condition + post\_pre\_rt\_change + (1 +post\_pre\_rt\_change + P\_stop\_trial\_change | subid),  
# trial\_neural\_behav\_roi %>% filter(trial\_n>50 & condition %in% c("CorrectStop","FailedStop"))  
# )  
#   
# anova(model\_full\_effects,model\_no\_p\_stop)  
#   
# save(model\_full\_effects, model\_no\_p\_stop, model\_no\_rt, file=paste0(dropbox\_dir,"/sample\_models.Rdata"))

load(paste0(dropbox\_dir,"/sample\_models.Rdata"))

# stargazer

problem with stargazer is that it has anova output which isn’t hte same as the anova function, and makes my analysis look bad :/ # papaja

table\_full\_effects = apa\_table(papaja::apa\_print(model\_full\_effects))  
table\_full\_effects

(#tab:unnamed-chunk-4)

\*\*

|  |  |  |  |
| --- | --- | --- | --- |
| Term |  | 95% CI |  |
| Intercept | -0.34 | [-0.49, -0.19] | -4.43 |
| Trial n s | -0.20 | [-0.28, -0.13] | -5.36 |
| ConditionFailedStop | -0.43 | [-0.48, -0.38] | -17.21 |
| P stop trial change | 37.24 | [26.96, 47.52] | 7.10 |
| Post pre rt change | -0.25 | [-0.41, -0.08] | -2.96 |

OK, seems like papaja won’t compare two models. How about gt?

# gt

#model\_comparison\_summary <- function(model\_list){  
model\_list <- list("RT Only"=model\_no\_p\_stop,  
 "Full model"=model\_full\_effects,  
 "P(Stop) Only"=model\_no\_rt  
 )

present\_estimate\_with\_std\_error<-function(coef\_row,dp=2){  
 return(paste0(  
 as.character(round(coef\_row[["Estimate"]],dp)), " (",   
 as.character(round(coef\_row[["Std. Error"]],dp)), ")"  
 ))  
}  
  
custom\_mixed\_model\_summary<-function(model){  
 m\_summary <- summary(model)  
 fixed\_effects = apply(m\_summary$coefficients,1,present\_estimate\_with\_std\_error)  
 return(fixed\_effects)  
}  
  
  
  
fixed\_effects\_list <- sapply(model\_list, custom\_mixed\_model\_summary)  
  
fixed\_effects\_df <- t(dplyr::bind\_rows(fixed\_effects\_list))  
  
model\_comparison <- do.call(anova,unname(model\_list))

## Warning in anova.merMod(new("lmerMod", resp = new("lmerResp", .xData =  
## <environment>), : failed to find model names, assigning generic names

## refitting model(s) with ML (instead of REML)

anova\_model\_order <- rownames(model\_comparison) %>% str\_extract("\\d+") %>% as.numeric  
#anova re-organizes its results depending on which are better fit.  
#we can do the same to the rest of the data, or we can re-organize back to how we had it.  
  
  
anova\_raw\_result\_df <- t(data.frame(model\_comparison)[,c("npar", "AIC", "BIC", "logLik", "Chisq","Pr..Chisq.")])  
anova\_reorganized\_list <- rep(list(NA),length(anova\_model\_order))  
#to re-orgnize back  
for (ri in 1:length(anova\_model\_order)){  
 anova\_reorganized\_list[[ri]] <- anova\_raw\_result\_df[,which(anova\_model\_order==ri)]  
}  
anova\_result\_df\_input\_order <- do.call(rbind, anova\_reorganized\_list)  
#or we can organize the fixed effects in terms of the anova  
#I think that is better...  
fixed\_effects\_df\_anova\_order <- fixed\_effects\_df[,anova\_model\_order] #%>% data.frame  
#then we can merge it with the anova results  
anova\_low\_precision<-c( "AIC", "BIC", "logLik")  
anova\_med\_precision<-c("Chisq")  
anova\_p\_precision<-c("Pr..Chisq.")  
anova\_results\_tided<-anova\_raw\_result\_df #%>% data.frame()  
anova\_results\_tided[anova\_low\_precision,]<-round(anova\_results\_tided[anova\_low\_precision,],0)  
anova\_results\_tided[anova\_med\_precision,]<-round(anova\_results\_tided[anova\_med\_precision,],2)  
anova\_results\_tided[anova\_p\_precision,]<-format.pval(anova\_results\_tided[anova\_p\_precision,])  
  
# fixed\_effects\_df\_anova\_order$group="Fixed effects"  
# anova\_results\_tided$group="Best fit"  
table\_cells <- rbind(fixed\_effects\_df\_anova\_order,anova\_results\_tided)   
  
table\_cells[is.na(table\_cells)] <- ""

library(gt)  
table\_cells

## MODEL1 MODEL3 MODEL2   
## (Intercept) "0.18 (0.02)" "-0.34 (0.08)" "-0.34 (0.08)"  
## trial\_n\_s "0.02 (0.02)" "-0.2 (0.04)" "-0.2 (0.04)"   
## conditionFailedStop "-0.43 (0.02)" "-0.44 (0.02)" "-0.43 (0.02)"  
## post\_pre\_rt\_change "-0.23 (0.08)" "" "-0.25 (0.08)"  
## P\_stop\_trial\_change "" "36.9 (5.25)" "37.24 (5.25)"  
## npar "11" "11" "12"   
## AIC "19217" "19189" "19182"   
## BIC "19292" "19264" "19264"   
## logLik "-9598" "-9583" "-9579"   
## Chisq "" "28.15" "8.54"   
## Pr..Chisq. "NA" "NA" "0.0034718"

model\_compare\_table <- gt(data.frame(table\_cells),rownames\_to\_stub = TRUE) %>%  
 tab\_stubhead(label="Parameter") %>%  
 tab\_spanner(  
 label="Median Activity 4-10 s Post-Stop Signal"  
 ) %>%  
 tab\_row\_group(  
 label = "Fixed effects",  
 rows = 1:nrow(fixed\_effects\_df\_anova\_order)  
 )

gt::as\_word(model\_compare\_table)

[1] “ParameterMODEL1MODEL3MODEL2Fixed effects(Intercept)0.18 (0.02)-0.34 (0.08)-0.34 (0.08)trial\_n\_s0.02 (0.02)-0.2 (0.04)-0.2 (0.04)conditionFailedStop-0.43 (0.02)-0.44 (0.02)-0.43 (0.02)post\_pre\_rt\_change-0.23 (0.08)-0.25 (0.08)P\_stop\_trial\_change36.9 (5.25)37.24 (5.25)npar111112AIC192171918919182BIC192921926419264logLik-9598-9583-9579Chisq28.158.54Pr..Chisq.NANA0.0034718”

# other

could try sjPlot