haven readxl here foreign	tidyverse dplyr broom lubridate	gtsummary ggplot2 corrplot	ggpubr GGally lmtest rsq psych MASS car	lattice caret pROC LogisticDx Mfp hoslem.test ResourceSelection performance largesamplehl	survival survminer mfp

```
data <-read_dta('data.dta')
read_excel
read_sav
read.csv
summary(data)
data %>%
mutate(across(where(is.labelled),
as_factor))
data %>% mutate(dur = data$doa %--%
data$dod) %>% mutate(dur =
as.duration(dur))
data %>% mutate(dur_days = dur
/ddays(1))
data %>% mutate(category = cut(data$IV,
c(0, 140, 160, 300), labels = c('a', 'b', 'c')))
data %>% group_by(event) %>%
summarise(mean.age = mean(age), sd.age
= sd(age), mean.gcs = mean(gcs), sd.gcs =
sd(gcs))
data %>% count(event, iv)
data %>% filter(num.iv > value, num.iv
>=40)
data %>% mutate(bmi =
weight/(height^2)) %>%
mutate(overweight = if_else(bmi
>=25.0,'overwt','not_overwt'))

new_data <- expand.grid(iv1 = c(a, b, c),
iv2 = c('yes', 'no'), iv3 = seq(from = 10, to =
90, by = 10)
```

```
model1 <- glm(dv ~ iv1 + iv2 + iv3, family =
binomial(link = 'logit'), data = data)
model2 <- glm(dv ~ iv1 + iv2 + iv3 + iv1:iv2, family =
binomial(link = 'logit'), data = data)
summary(model1)
anova(model1, model2, test="Chisq")
tidy(model1, conf.int = T)
tidy(model1, conf.int = T, exp = T)
augment(model1, type.predict = 'link' or 'response')
predict(final.m, type = 'link' or'term' or 'response')
fit.m <- augment(model1, type.predict = 'response')
|> mutate(pred.class = factor(ifelse(.fitted > 0.5,
'yes', 'no')))
confusionMatrix(fit.m$dmdx, fit.m$pred.class)
roc <- roc(data$dv, model1$fitted.values)
auc(roc)
fit.hl <- gof(model1, g = 8)
fit.hl$gof
plot(model1)
influence.measures(model1)
hoslem.test(data$dv, fitted(model1), g = 10)
performance_hosmer(model1, n_bins = 10)
hltest(model1, G = 10)
prem.final.res <-lrm(dv ~ iv1 + iv2 + iv3, data = data,
y = TRUE, x = TRUE)
residuals(prem.final.res, type = "gof")
```

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```
tbl_summary(by = dv) %>%  add_overall()
%>% as_gt()
data %>% select(iv1, iv2) %>%
tbl_summary(statistic =
list(all_continuous() ~ "{mean} ({sd})"))
tbl_regression(model, exp = T)
```

```
model1 <- lm(dv ~  iv1 + iv2 + iv3, data =
data)
model2 <- lm(dv ~  iv1 + iv2 + iv3 + iv1:iv2,
data = data)
tidy(model, conf.int = TRUE)
anova(model1, model2)
augment(model1)
augment(model1, newdata = new_data)
plot(model1)
ncvTest(model1)
bp.test(model1)
shapiro.test(model1$residuals)
aug.model<- augment(model1) %>%
  ggplot(aes(x = iv, y = .resid)) +
geom_point() +  geom_smooth()
res.mod <- residuals(model1)
hist(res.mod)
plot(resid_no_outlier$.fitted,
resid_no_outlier$.resid, abline(h=0,
col="red", lty=2))
cook <- 4/((nrow(data)-
length(model1$coefficients)-2))
plot(model1, which = 4, cook.levels = cook)
non.influen.obs <- aug.model %>%
  filter(.std.resid < 2 & .std.resid > -2)
```

```
KM <- survfit(Surv(time = dur_days, event == 'dead')
~ 1, type = "kaplan-meier", data = data)
summary(KM)
ggsurvplot(KM, surv.median.line = "hv")
quantile(KM, probs = c(0.25, 0.50, 0.75))
survfit(Surv(time = dur_days, event == 'dead') ~ sex,
type = "kaplan-meier", data = data)
summary(KM, times = c(t1, t2, t3))
survdiff(Surv(time = dur_days, event == 'dead') ~ sex,
data = data, rho = 0 or 1)
cox1 <- coxph(Surv(time = dur_days, event = event
== 'dead') ~ iv1 +iv2 +iv3, data = data)
tidy(cox, conf.int = T, exp=T)
cox2 <- coxph(Surv(time = dur_days, event = event
== 'dead') ~  iv1 + iv2 + iv3 + iv1:iv2, data = data)
anova(model1, model2, test = 'Chisq')
augment(cox1, data = data)
augment(cox1, newdata = new_data)
predict(cox1l, newdata = new_data, type = 'risk') or
'expected' or 'lp'
basehaz(cox1)
ggcoxfunctional(Surv(time = dur_days, event = event
== 'dead') ~  iv1 + iv2 +iv3, data = data))
phm <- cox.zph(cox.model, transform = 'km', global =
TRUE)
plot(phm)
cox.zph(cox.model, transform = 'rank' or 'log')
resid.cox <- resid(cox.model, type = "score") or
martingale/deviance/schoenfeld/dfbeta/scaledsch
plot(data$iv, resid.cox[,2], ylab="name residuals")
```

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