# model.R

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```
library(readxl)
library(tidyverse)
```

```
## -- Attaching packages ---------------------------------------------------------------------------- t

## v ggplot2 3.3.2     v purrr   0.3.4
## v tibble  3.0.3     v dplyr   1.0.0
## v tidyr   1.1.0     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.5.0

## -- Conflicts ------------------------------------------------------------------------------- tidyve
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(gridExtra)
```

```
##
## Attaching package: 'gridExtra'

## The following object is masked from 'package:dplyr':
##
##     combine
```

```
study1 <- read_excel("Study1 Data Unrounded.xlsx")
study2 <- read_excel("Study2 Data Unrounded.xlsx")

## study 1
study1.mod1 <- glm(sent ~ trust, data = study1, family = "binomial")
summary(study1.mod1)
```

```
##
## Call:
## glm(formula = sent ~ trust, family = "binomial", data = study1)
##
## Deviance Residuals:
##      Min        1Q    Median        3Q       Max
## -1.37073  -1.17373   0.06331   1.16488   1.40913
##
## Coefficients:
```

```
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept)   0.9882     0.3708   2.665  0.00770 **
## trust        -0.3550     0.1306  -2.718  0.00657 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 1028.6  on 741  degrees of freedom
## Residual deviance: 1021.1  on 740  degrees of freedom
## AIC: 1025.1
##
## Number of Fisher Scoring iterations: 4
```

```
study1.mod2 <- glm(
  sent ~ trust + zAfro + attract + maturity + zfWHR + glasses + tattoos,
  data = study1, family = "binomial"
  )
summary(study1.mod2)
```

```
##
## Call:
## glm(formula = sent ~ trust + zAfro + attract + maturity + zfWHR +
##     glasses + tattoos, family = "binomial", data = study1)
##
## Deviance Residuals:
##      Min        1Q    Median        3Q       Max
## -1.72997  -1.12114   0.02173   1.11971   1.69625
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept)  2.18500    0.81273   2.688  0.00718 **
## trust       -0.40908    0.14727  -2.778  0.00547 **
## zAfro       -0.23862    0.07995  -2.985  0.00284 **
## attract     -0.16261    0.14205  -1.145  0.25230
## maturity    -0.13589    0.08841  -1.537  0.12431
## zfWHR        0.32639    0.08385   3.893 9.92e-05 ***
## glasses      0.44806    0.21875   2.048  0.04054 *
## tattoos     -0.55039    0.55835  -0.986  0.32427
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 1028.63  on 741  degrees of freedom
## Residual deviance:  986.96  on 734  degrees of freedom
## AIC: 1003
##
## Number of Fisher Scoring iterations: 4
```

```
## study 2
study2.mod1 <- glm(sent ~ trust, data = study2, family = "binomial")
summary(study2.mod1)
```

```
##
## Call:
## glm(formula = sent ~ trust, family = "binomial", data = study2)
##
## Deviance Residuals:
##     Min       1Q   Median       3Q      Max
## -2.2244  -0.8936  -0.6561   0.9816   1.6519
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept)   5.9603     2.7071   2.202   0.0277 *
## trust        -1.5489     0.6777  -2.286   0.0223 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 51.049  on 36  degrees of freedom
## Residual deviance: 44.581  on 35  degrees of freedom
## AIC: 48.581
##
## Number of Fisher Scoring iterations: 4
```

```
study2.mod2 <- glm(
  sent ~ trust + zAfro + attract + maturity + glasses + served,
  data = study2, family = "binomial"
  )
summary(study2.mod2)
```

```
##
## Call:
## glm(formula = sent ~ trust + zAfro + attract + maturity + glasses +
##     served, family = "binomial", data = study2)
##
## Deviance Residuals:
##     Min       1Q   Median       3Q      Max
## -2.0923  -0.7762  -0.3484   0.8499   1.8058
##
## Coefficients:
##             Estimate Std. Error z value Pr(>|z|)
## (Intercept)  7.48466    4.56650   1.639   0.1012
## trust       -1.47338    0.78307  -1.882   0.0599 .
## zAfro       -0.51346    0.41222  -1.246   0.2129
## attract     -0.30169    0.85817  -0.352   0.7252
## maturity     0.16135    0.53009   0.304   0.7608
## glasses      1.13605    1.01248   1.122   0.2618
## served      -0.14218    0.07765  -1.831   0.0671 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 51.049  on 36  degrees of freedom
## Residual deviance: 38.538  on 30  degrees of freedom
```

```
## AIC: 52.538
##
## Number of Fisher Scoring iterations: 4
```

```
# recreating the table for study 2

coef1 <- rownames_to_column(as.data.frame(summary(study2.mod1)$coefficients), var = "Variable")
coef2 <- rownames_to_column(as.data.frame(summary(study2.mod2)$coefficients), var = "Variable")

names <-  data.frame(Variable = c("(Intercept)", "trust", "zAfro", "attract", "maturity", "glasses", "s
                     Predictor = c("Intercept", "Trustworthiness", "Afrocentricity", "Attractiveness",

table <-
  bind_rows(coef1, coef2) %>%
  mutate(`Odds Ratio` = round(exp(Estimate),2),
         b = round(Estimate,2),
         or.lower = exp(Estimate - 1.96*`Std. Error`),
         or.upper = exp(Estimate + 1.96*`Std. Error`),
         `OR 95% CI` = paste("[", round(or.lower,2), ", ", round(or.upper,2), "]", sep = ""),
         `Std. Error` = round(`Std. Error`, 2),
         `Pr(>|z|)` = round(`Pr(>|z|)`, 3)) %>%
  left_join(names) %>%
  select(Predictor, b, `Pr(>|z|)`, `Std. Error`, `Odds Ratio`, `OR 95% CI`)
```

```
## Joining, by = "Variable"
```

```
rownames <- rep("", nrow(table))
rownames[table$Predictor == "Intercept"] <- c("Model 1", "Model 2")

table$`OR 95% CI`[table$Predictor == "Intercept"] <- NA

png("table2.png", height = 250, width = 500)
grid.table(table, rows = rownames)
dev.off()
```

```
## pdf
##   2
```