

## Weighting exemplar 5 in R

```
>
> resp<-
glm(cbind(AyrA_num,npop)~agegrp+gender+agegrp*agegrp+agegrp*gender+agegrp*agegrp*gender+sinc+sacc+
+
+
agegrp*sinc+agegrp*agegrp*sinc,data=data,family=binomial)
Warning message:
non-integer counts in a binomial glm! in: eval(expr, envir, enclos)
>
> print(summary(resp))

Call:
glm(formula = cbind(AyrA_num, npop) ~ agegrp + gender + agegrp *
  agegrp + agegrp * gender + agegrp * agegrp * gender + sinc +
  sacc + agegrp * sinc + agegrp * agegrp * sinc, family = binomial,
  data = data)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-1.5835  -0.8381  -0.6478   0.4631   4.1811

Coefficients:
            Estimate Std. Error z value Pr(>|z|)
(Intercept) -4.1010816  0.0763599 -53.707 < 2e-16 ***
agegrp       0.0198690  0.0092598   2.146 0.031895 *
genderM     -0.6984941  0.0790275  -8.839 < 2e-16 ***
sinc        -0.0248137  0.0036854  -6.733 1.66e-11 ***
sacc         0.0427372  0.0236783   1.805 0.071088 .
agegrp:genderM 0.0826131  0.0093893   8.799 < 2e-16 ***
agegrp:sinc   0.0015570  0.0004379   3.556 0.000377 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 11118  on 12472  degrees of freedom
Residual deviance: 10612  on 12466  degrees of freedom
AIC: 17694

Number of Fisher Scoring iterations: 5

> #
> # we now get the linear predictor
> #
> lp<-predict(resp)
#
> # and make it into a predicted probability
> #
> phat<-1/(1+exp(-lp))
> #
>
```