FSE Early Adopters

This is a supplementary markdown file for FSE Submission title "Heard it through the GitVine: An Empirical Study of Tool Diffusion Across the npm Ecosystem."

```
column <- "first_badge"
badges <- read.csv("early-adopters.csv", stringsAsFactors=FALSE)

cutoff_date <- badges[ceiling(nrow(badges)*0.16),][column][1,]
badges$early_badge_adopter <- badges[column] <= cutoff_date
table(badges$early_badge_adopter)
```

```
##
## FALSE  TRUE
## 19385  3693
```

```
badge.fit.1 <- glm(early_badge_adopter ~ num_langs + num_followers +
 num_stars_gotten + num_commits + days_old, family="binomial", data=badges)
vif(badge.fit.1)
```

```
##        num_langs    num_followers num_stars_gotten      num_commits
##         1.017189         1.451020         1.450613         1.003300
##         days_old
##         1.012446
```

```
summary(badge.fit.1)
```

```
##
## Call:
## glm(formula = early_badge_adopter ~ num_langs + num_followers +
##     num_stars_gotten + num_commits + days_old, family = "binomial",
##     data = badges)
##
## Deviance Residuals:
##     Min       1Q   Median       3Q      Max
## -3.1395  -0.5995  -0.4091  -0.2382   3.0625
##
## Coefficients:
##                    Estimate Std. Error z value Pr(>|z|)
## (Intercept)      -5.909e+00  1.003e-01 -58.893  < 2e-16 ***
## num_langs         4.673e-02  1.960e-03  23.847  < 2e-16 ***
## num_followers     1.094e-04  4.501e-05   2.431  0.01504 *
## num_stars_gotten  2.512e-05  8.640e-06   2.907  0.00364 **
## num_commits       5.488e-07  6.747e-07   0.813  0.41596
## days_old          1.287e-03  3.135e-05  41.056  < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##     Null deviance: 20295  on 23077  degrees of freedom
## Residual deviance: 17244  on 23072  degrees of freedom
## AIC: 17256
##
## Number of Fisher Scoring iterations: 5
```