

APPENDIX C

RESULTS OF THE MODELS WE BUILT

Base MODEL

Generalized linear mixed model fit by maximum likelihood (Laplace Approximation) ['glmerMod']

Family: binomial (logit)

Formula: pr_status ~ repo_pr_tenure_mnth + repo_pr_popularity + repo_pr_team_size +
perc_external_contribs + prs_succ_rate + pr_files_changed +
prs_main_team_member + prs_popularity + prs_watched_repo +
prs_tenure_mnth + pr_comments_counts + pr_num_commits + prs_experience +
prs_repo_experience + prs_continent + same_nationality + intra_branch + (1 | prs_id) + (1 | repo_id)

Data: eth_08_EU

Control: glmerControl(optimizer = "nloptwrap", calc.derivs = FALSE, optCtrl = list(maxeval = 50))

| AIC | BIC | logLik | deviance | df.resid |
|----------|----------|-----------|----------|----------|
| 965219.6 | 965547.9 | -482582.8 | 965165.6 | 1407595 |

Scaled residuals:

| Min | 1Q | Median | 3Q | Max |
|----------|--------|--------|--------|---------|
| -22.1909 | 0.1093 | 0.2253 | 0.3819 | 18.8907 |

Random effects:

| Groups | Name | Variance | Std.Dev. |
|--------|------|----------|----------|
|--------|------|----------|----------|

| | | | |
|--------|-------------|--------|--------|
| prs_id | (Intercept) | 0.6243 | 0.7901 |
|--------|-------------|--------|--------|

| | | | |
|---------|-------------|--------|--------|
| repo_id | (Intercept) | 1.9238 | 1.3870 |
|---------|-------------|--------|--------|

Number of obs: 1407622, groups: prs_id, 187616; repo_id, 30415

Fixed effects:

| | Estimate | Std. Error | z value | Pr(> z) | |
|-----------------------------------|------------|------------|---------|----------|-----|
| (Intercept) | 2.262e+00 | 1.767e-02 | 128.063 | < 2e-16 | *** |
| repo_pr_tenure_mnth | 8.238e-03 | 6.323e-03 | 1.303 | 0.1926 | |
| repo_pr_popularity | 0.000e+00 | 9.864e-03 | 0.000 | 1.0000 | |
| repo_pr_team_size | 1.325e-02 | 9.922e-03 | 1.335 | 0.1819 | |
| perc_external_contribs | -2.614e-02 | 5.025e-03 | -5.201 | 1.98e-07 | *** |
| prs_succ_rate | 1.823e-01 | 3.904e-03 | 46.683 | < 2e-16 | *** |
| pr_files_changed | -3.554e-04 | 2.455e-05 | -14.477 | < 2e-16 | *** |
| prs_main_team_member1 | 1.679e-01 | 2.624e-02 | 6.400 | 1.55e-10 | *** |
| prs_popularity | 9.231e-02 | 5.632e-03 | 16.392 | < 2e-16 | *** |
| prs_watched_repo1 | 8.222e-02 | 7.972e-03 | 10.314 | < 2e-16 | *** |
| prs_tenure_mnth | 3.108e-02 | 4.749e-03 | 6.544 | 5.98e-11 | *** |
| pr_comments_counts | 1.282e-03 | 2.876e-03 | 0.446 | 0.6559 | |
| pr_num_commits | -2.105e-01 | 2.913e-03 | -72.266 | < 2e-16 | *** |
| prs_experience | -7.333e-02 | 8.204e-03 | -8.938 | < 2e-16 | *** |
| prs_repo_experience | 5.094e-01 | 7.846e-03 | 64.929 | < 2e-16 | *** |
| prs_continentAsia | -1.059e-01 | 1.712e-02 | -6.187 | 6.12e-10 | *** |
| prs_continentAfrica | -1.670e-01 | 6.102e-02 | -2.737 | 0.0062 | ** |
| prs_continentSouth America | -7.332e-02 | 3.347e-02 | -2.190 | 0.0285 | * |
| prs_continentAntarctica | 2.093e-01 | 8.715e-01 | 0.240 | 0.8102 | |
| prs_continentUnknown | 8.532e-02 | 1.439e-02 | 5.931 | 3.02e-09 | *** |
| prs_continentEurope | 8.018e-02 | 1.167e-02 | 6.868 | 6.50e-12 | *** |
| prs_continentAustralia | 5.408e-02 | 2.771e-02 | 1.952 | 0.0510 | . |
| prs_pri_same_nationalityDifferent | -2.108e-01 | 1.055e-02 | -19.992 | < 2e-16 | *** |
| prs_pri_same_nationalityUnknown | -2.048e-01 | 1.308e-02 | -15.665 | < 2e-16 | *** |
| intra_branch1 | 2.998e-01 | 1.537e-02 | 19.514 | < 2e-16 | *** |

MODEL Submitter_08 ##### ### All Ethnicities (threshold 0.8) ,

Generalized linear mixed model fit by maximum likelihood (Laplace Approximation) [glmerMod]

Family: binomial (logit)

Formula: pr_status ~ repo_pr_tenure_mnth + repo_pr_popularity + repo_pr_team_size +
 perc_external_contribs + prs_succ_rate + pr_files_changed +
 prs_main_team_member1 + prs_popularity + prs_watched_repo1 +
 prs_tenure_mnth + pr_comments_counts + pr_num_commits + prs_eth_8 +
 prs_experience + prs_repo_experience + prs_continent + prs_pri_same_nationality +
 intra_branch + (1 | prs_id) + (1 | repo_id)

Data: eth_08_EU

Control: glmerControl(optimizer = "nloptwrap", calc.derivs = FALSE, optCtrl = list(maxeval = 50))

| | | | | |
|----------|----------|-----------|----------|----------|
| AIC | BIC | logLik | deviance | df.resid |
| 965170.3 | 965535.1 | -482555.2 | 965110.3 | 1407592 |

Scaled residuals:

| | | | | |
|----------|--------|--------|--------|---------|
| Min | 1Q | Median | 3Q | Max |
| -21.9050 | 0.1093 | 0.2252 | 0.3818 | 18.8516 |

Random effects:

| | | | |
|--------|------|----------|----------|
| Groups | Name | Variance | Std.Dev. |
|--------|------|----------|----------|

| | | | |
|--------|-------------|--------|--------|
| prs_id | (Intercept) | 0.6243 | 0.7901 |
|--------|-------------|--------|--------|

| | | | |
|---------|-------------|--------|--------|
| repo_id | (Intercept) | 1.9256 | 1.3877 |
|---------|-------------|--------|--------|

Number of obs: 1407622, groups: prs_id, 187616; repo_id, 30415

Fixed effects:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------------|------------|------------|---------|--------------|
| (Intercept) | 2.273e+00 | 1.773e-02 | 128.207 | < 2e-16 *** |
| repo_pr_tenure_mnth | 8.872e-03 | 6.324e-03 | 1.403 | 0.160673 |
| repo_pr_popularity | 0.000e+00 | 9.866e-03 | 0.000 | 1.000000 |
| repo_pr_team_size | 1.434e-02 | 9.924e-03 | 1.445 | 0.148415 |
| perc_external_contribs | -2.608e-02 | 5.026e-03 | -5.190 | 2.11e-07 *** |
| prs_succ_rate | 1.820e-01 | 3.905e-03 | 46.623 | < 2e-16 *** |
| pr_files_changed | -3.552e-04 | 2.455e-05 | -14.469 | < 2e-16 *** |
| prs_main_team_member1 | 1.671e-01 | 2.624e-02 | 6.368 | 1.92e-10 *** |
| prs_popularity | 9.346e-02 | 5.634e-03 | 16.589 | < 2e-16 *** |
| prs_watched_repo1 | 8.225e-02 | 7.972e-03 | 10.318 | < 2e-16 *** |
| prs_tenure_mnth | 2.960e-02 | 4.755e-03 | 6.225 | 4.82e-10 *** |
| pr_comments_counts | 1.313e-03 | 2.877e-03 | 0.456 | 0.648125 |
| pr_num_commits | -2.104e-01 | 2.914e-03 | -72.229 | < 2e-16 *** |
| prs_eth_8Black | -4.986e-02 | 9.633e-02 | -0.518 | 0.604737 |
| prs_eth_8API | -1.042e-01 | 1.522e-02 | -6.845 | 7.67e-12 *** |
| prs_eth_8Hispanic | -6.522e-02 | 2.227e-02 | -2.928 | 0.003408 ** |
| prs_experience | -7.492e-02 | 8.207e-03 | -9.129 | < 2e-16 *** |
| pr_nth | 5.102e-01 | 7.847e-03 | 65.018 | < 2e-16 *** |
| prs_continentAsia | -6.780e-02 | 1.811e-02 | -3.744 | 0.000181 *** |
| prs_continentAfrica | -1.702e-01 | 6.150e-02 | -2.767 | 0.005649 ** |
| prs_continentSouth America | -5.146e-02 | 3.486e-02 | -1.476 | 0.139946 |
| prs_continentAntarctica | 2.056e-01 | 8.703e-01 | 0.236 | 0.813285 |
| prs_continentUnknown | 8.799e-02 | 1.439e-02 | 6.114 | 9.75e-10 *** |
| prs_continentEurope | 7.514e-02 | 1.170e-02 | 6.422 | 1.34e-10 *** |
| prs_continentAustralia | 5.285e-02 | 2.771e-02 | 1.907 | 0.056495 . |
| prs_pri_same_nationalityDifferent | -2.105e-01 | 1.055e-02 | -19.958 | < 2e-16 *** |
| prs_pri_same_nationalityUnknown | -2.045e-01 | 1.308e-02 | -15.641 | < 2e-16 *** |
| intra_branch1 | 2.998e-01 | 1.537e-02 | 19.512 | < 2e-16 *** |

Comparing submitter model with same and no same ethnicity variable.

| | Df | AIC | BIC | logLik | deviance | Chisq | Chi | Df | Pr(>Chisq) |
|--------------------|----|--------|--------|---------|----------|--------|-----|-----------|------------|
| model_base_EU | 27 | 965220 | 965548 | -482583 | 965166 | | | | |
| model_submitter_EU | 30 | 965170 | 965535 | -482555 | 965110 | 55.288 | 3 | 5.959e-12 | *** |

```

### MODEL Same_ethnicity_Hispanic #####
### All Ethnicities (threshold 0.8) #####

```

```

Generalized linear mixed model fit by maximum likelihood (Laplace Approximation)
['glmerMod']
Family: binomial ( logit )
Formula: pr_status ~ repo_pr_tenure_mnth + repo_pr_popularity + repo_pr_team_size +
  perc_external_contribs + prs_succ_rate + pr_files_changed +
  prs_main_team_member + prs_popularity + prs_watched_repo +
  prs_followed_pri + prs_tenure_mnth + pr_comments_counts +
  pr_num_commits + prs_experience + pr_nth + prs_continent +
  prs_pri_same_nationality + intra_branch + white_hispanic + (1 | prs_id) + (1
| repo_id)
Data: White_Hispanic
Control: glmerControl(optimizer = "nloptwrap", calc.derivs = FALSE, optCtrl =
list(maxeval = 50))

```

| AIC | BIC | logLik | deviance | df.resid |
|---------|---------|----------|----------|----------|
| 33833.9 | 34078.5 | -16889.0 | 33777.9 | 45940 |

Scaled residuals:

| Min | 1Q | Median | 3Q | Max |
|----------|--------|--------|--------|--------|
| -13.0999 | 0.1017 | 0.2299 | 0.3911 | 6.5676 |

Random effects:

| Groups | Name | Variance | Std.Dev. |
|---------|-------------|----------|----------|
| prs_id | (Intercept) | 0.5664 | 0.7526 |
| repo_id | (Intercept) | 1.5916 | 1.2616 |

Number of obs: 45968, groups: prs_id, 7519; repo_id, 6945

Fixed effects:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------------|------------|------------|---------|--------------|
| (Intercept) | 1.8770125 | 0.0808051 | 23.229 | < 2e-16 *** |
| repo_pr_tenure_mnth | 0.0691582 | 0.0269829 | 2.563 | 0.010376 * |
| repo_pr_popularity | -0.0309107 | 0.0387179 | -0.798 | 0.424663 |
| repo_pr_team_size | -0.2244503 | 0.0422952 | -5.307 | 1.12e-07 *** |
| perc_external_contribs | -0.0066519 | 0.0226296 | -0.294 | 0.768797 |
| prs_succ_rate | 0.2155798 | 0.0213350 | 10.105 | < 2e-16 *** |
| pr_files_changed | -0.0005260 | 0.0001597 | -3.294 | 0.000988 *** |
| prs_main_team_member1 | 0.5745823 | 0.1844586 | 3.115 | 0.001840 ** |
| prs_popularity | 0.0031332 | 0.0304950 | 0.103 | 0.918167 |
| prs_watched_repo1 | 0.0542915 | 0.0442700 | 1.226 | 0.220059 |
| prs_tenure_mnth | 0.1241617 | 0.0260712 | 4.762 | 1.91e-06 *** |
| pr_comments_counts | 0.0122644 | 0.0160490 | 0.764 | 0.444758 |
| pr_num_commits | -0.2260952 | 0.0160827 | -14.058 | < 2e-16 *** |
| prs_experience | -0.2411955 | 0.0464997 | -5.187 | 2.14e-07 *** |
| pr_nth | 0.6165589 | 0.0471213 | 13.085 | < 2e-16 *** |
| prs_continentAsia | 0.4656812 | 0.2202308 | 2.115 | 0.034471 * |
| prs_continentAfrica | 1.1283945 | 0.8059637 | 1.400 | 0.161496 |
| prs_continentSouth America | -0.0315720 | 0.0706978 | -0.447 | 0.655180 |
| prs_continentUnknown | 0.3067880 | 0.0813994 | 3.769 | 0.000164 *** |
| prs_continentEurope | 0.0802974 | 0.0640138 | 1.254 | 0.209706 |
| prs_continentOceania | 0.1256501 | 0.2983302 | 0.421 | 0.673625 |
| prs_pri_same_nationalityDifferent | -0.3137113 | 0.0685400 | -4.577 | 4.72e-06 *** |
| prs_pri_same_nationalityUnknown | -0.4912372 | 0.0794825 | -6.180 | 6.39e-10 *** |
| intra_branch1 | 0.4506343 | 0.0934081 | 4.824 | 1.40e-06 *** |
| same_eth1 | 0.5596182 | 0.0725134 | 7.717 | 1.19e-14 *** |

```

#### MODEL Same_ethnicity_API #####
#### All Ethnicities (threshold 0.8) #####

```

```

Generalized linear mixed model fit by maximum likelihood (Laplace Approximation)
['glmerMod']
Family: binomial ( logit )
Formula: pr_status ~ repo_pr_tenure_mnth + repo_pr_popularity + repo_pr_team_size +
  perc_external_contribs + prs_succ_rate + pr_files_changed +
  prs_main_team_member + prs_popularity + prs_watched_repo +
  prs_tenure_mnth + pr_comments_counts + pr_num_commits + prs_experience +
  pr_nth + prs_continent + prs_pri_same_nationality + intra_branch + same_eth +
(1 | prs_id) + (1 | repo_id)
Data: White_API
Control: glmerControl(optimizer = "nloptwrap", calc.derivs = FALSE, optCtrl =
list(maxeval = 50))

```

| | | | | |
|---------|---------|----------|----------|----------|
| AIC | BIC | logLik | deviance | df.resid |
| 84634.6 | 84905.0 | -42289.3 | 84578.6 | 115663 |

Scaled residuals:

| | | | | |
|----------|--------|--------|--------|--------|
| Min | 1Q | Median | 3Q | Max |
| -20.2439 | 0.0980 | 0.2284 | 0.3845 | 8.1744 |

Random effects:

| Groups | Name | Variance | Std.Dev. |
|---------|-------------|----------|----------|
| prs_id | (Intercept) | 0.7158 | 0.846 |
| repo_id | (Intercept) | 1.9459 | 1.395 |

Number of obs: 115691, groups: prs_id, 20227; repo_id, 10549

Fixed effects:

| | Estimate | Std. Error | z value | Pr(> z) | |
|-----------------------------------|------------|------------|---------|----------|-----|
| (Intercept) | 1.833e+00 | 5.020e-02 | 36.503 | < 2e-16 | *** |
| repo_pr_tenure_mnth | 8.749e-02 | 1.942e-02 | 4.504 | 6.66e-06 | *** |
| repo_pr_popularity | -1.032e-01 | 2.879e-02 | -3.585 | 0.000338 | *** |
| repo_pr_team_size | -2.038e-01 | 3.222e-02 | -6.325 | 2.53e-10 | *** |
| perc_external_contribs | 2.070e-02 | 1.674e-02 | 1.236 | 0.216368 | |
| prs_succ_rate | 1.997e-01 | 1.330e-02 | 15.010 | < 2e-16 | *** |
| pr_files_changed | -2.060e-04 | 5.016e-05 | -4.107 | 4.01e-05 | *** |
| prs_main_team_member1 | 7.273e-02 | 1.356e-01 | 0.536 | 0.591753 | |
| prs_popularity | 1.513e-01 | 1.813e-02 | 8.350 | < 2e-16 | *** |
| prs_watched_repo1 | 1.026e-01 | 2.814e-02 | 3.647 | 0.000265 | *** |
| prs_tenure_mnth | 6.533e-02 | 1.540e-02 | 4.241 | 2.22e-05 | *** |
| pr_comments_counts | 2.889e-02 | 9.925e-03 | 2.911 | 0.003606 | ** |
| pr_num_commits | -2.184e-01 | 9.897e-03 | -22.070 | < 2e-16 | *** |
| prs_experience | -1.109e-01 | 3.103e-02 | -3.573 | 0.000353 | *** |
| pr_nth | 4.867e-01 | 3.168e-02 | 15.360 | < 2e-16 | *** |
| prs_continentAsia | -1.032e-01 | 4.127e-02 | -2.501 | 0.012374 | * |
| prs_continentAfrica | -4.919e-01 | 4.376e-01 | -1.124 | 0.261021 | |
| prs_continentSouth America | -3.510e-01 | 3.202e-01 | -1.096 | 0.272887 | |
| prs_continentAntarctica | 9.877e+00 | 3.202e+02 | 0.031 | 0.975390 | |
| prs_continentUnknown | 6.934e-02 | 4.848e-02 | 1.430 | 0.152619 | |
| prs_continentEurope | -5.139e-02 | 7.316e-02 | -0.703 | 0.482352 | |
| prs_continentOceania | 8.654e-02 | 1.141e-01 | 0.759 | 0.448014 | |
| prs_pri_same_nationalityDifferent | -2.333e-01 | 4.226e-02 | -5.521 | 3.37e-08 | *** |
| prs_pri_same_nationalityUnknown | -2.516e-01 | 4.591e-02 | -5.480 | 4.25e-08 | *** |
| intra_branch1 | 6.014e-02 | 5.731e-02 | 1.049 | 0.293974 | |
| same_eth1 | 3.065e-01 | 3.922e-02 | 7.816 | 5.47e-15 | *** |

```
### MODEL Same_ethnicity_Black #####
### All Ethnicities (threshold 0.8) #####
```

```
Generalized linear mixed model fit by maximum likelihood (Laplace Approximation)
['glmerMod']
Family: binomial ( logit )
Formula: pr_status ~ repo_pr_tenure_mnth + repo_pr_popularity + repo_pr_team_size +
  perc_external_contribs + prs_succ_rate + pr_files_changed +
  prs_main_team_member + prs_popularity + prs_watched_repo +
  prs_tenure_mnth + pr_comments_counts + pr_num_commits + prs_experience +
  pr_nth + prs_continent + prs_pri_same_nationality + intra_branch + same_eth +
(1 | prs_id) + (1 | repo_id)
Data: White Black
Control: glmerControl(optimizer = "nloptwrap", calc.derivs = FALSE, optCtrl =
list(maxeval = 50))
```

| AIC | BIC | logLik | deviance | df.resid |
|--------|--------|--------|----------|----------|
| 1442.3 | 1593.1 | -694.2 | 1388.3 | 1935 |

Scaled residuals:

| Min | 1Q | Median | 3Q | Max |
|----------|--------|--------|--------|--------|
| -10.1115 | 0.1222 | 0.2178 | 0.3801 | 1.9548 |

Random effects:

| Groups | Name | Variance | Std.Dev. |
|---------|-------------|----------|----------|
| repo_id | (Intercept) | 1.0091 | 1.0045 |
| prs_id | (Intercept) | 0.4157 | 0.6448 |

Number of obs: 1962, groups: repo_id, 490; prs_id, 350

Fixed effects:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------------|-----------|------------|---------|--------------|
| (Intercept) | 1.620779 | 0.327677 | 4.946 | 7.56e-07 *** |
| repo_pr_tenure_mnth | 0.029331 | 0.122945 | 0.239 | 0.811438 |
| repo_pr_popularity | -0.077749 | 0.165957 | -0.468 | 0.639436 |
| repo_pr_team_size | -0.376080 | 0.167285 | -2.248 | 0.024567 * |
| perc_external_contribs | 0.189865 | 0.099411 | 1.910 | 0.056146 . |
| prs_succ_rate | 0.218617 | 0.104550 | 2.091 | 0.036526 * |
| pr_files_changed | 0.001331 | 0.002198 | 0.605 | 0.544847 |
| pr_main_team_member1 | 0.658779 | 1.027022 | 0.641 | 0.521233 |
| prs_popularity | 0.321914 | 0.137702 | 2.338 | 0.019400 * |
| prs_watched_repo1 | -0.206531 | 0.226989 | -0.910 | 0.362890 |
| prs_tenure_mnth | -0.003738 | 0.105056 | -0.036 | 0.971614 |
| pr_comments_counts | 0.106720 | 0.080530 | 1.325 | 0.185097 |
| pr_num_commits | -0.297150 | 0.072548 | -4.096 | 4.21e-05 *** |
| prs_experience | -0.222854 | 0.249210 | -0.894 | 0.371192 |
| pr_nth | 0.891010 | 0.254862 | 3.496 | 0.000472 *** |
| prs_continentAsia | -0.944570 | 0.520757 | -1.814 | 0.069703 . |
| prs_continentAfrica | 0.118901 | 0.341175 | 0.349 | 0.727461 |
| prs_continentSouth America | 0.698802 | 1.359470 | 0.514 | 0.607235 |
| prs_continentUnknown | 0.352854 | 0.376940 | 0.936 | 0.349221 |
| prs_continentEurope | 0.339520 | 0.343176 | 0.989 | 0.322493 |
| prs_continentOceania | -0.202291 | 0.772595 | -0.262 | 0.793450 |
| prs_pri_same_nationalityDifferent | 0.036415 | 0.335208 | 0.109 | 0.913494 |
| prs_pri_same_nationalityUnknown | 0.303884 | 0.383044 | 0.793 | 0.427581 |
| intra_branch1 | 0.361082 | 0.339950 | 1.062 | 0.288162 |
| same_eth1 | 2.245506 | 1.131000 | 1.985 | 0.047098 * |

MODEL Submitter_07. #####
 ### All Ethnicities (threshold 0.7) #####

| | Estimate | Std. Error | z value | Pr(> z) | |
|-----------------------------------|------------|------------|---------|----------|-----|
| (Intercept) | 2.3319690 | 0.0164431 | 141.821 | < 2e-16 | *** |
| repo_pr_tenure_mnth | -0.0097300 | 0.0056471 | -1.723 | 0.084886 | . |
| repo_pr_popularity | 0.0880617 | 0.0088854 | 9.911 | < 2e-16 | *** |
| repo_pr_team_size | 0.0000000 | 0.0089607 | 0.000 | 1.000000 | |
| perc_external_contribs | -0.0466089 | 0.0044691 | -10.429 | < 2e-16 | *** |
| prs_succ_rate | 0.1883487 | 0.0033911 | 55.542 | < 2e-16 | *** |
| pr_files_changed | -0.0003568 | 0.0000197 | -18.116 | < 2e-16 | *** |
| prs_main_team_member1 | 0.1479695 | 0.0235632 | 6.280 | 3.39e-10 | *** |
| prs_popularity | 0.0946730 | 0.0049289 | 19.208 | < 2e-16 | *** |
| prs_watched_repo1 | 0.0852879 | 0.0069651 | 12.245 | < 2e-16 | *** |
| prs_tenure_mnth | 0.0531542 | 0.0039105 | 13.593 | < 2e-16 | *** |
| pr_comments_counts | -0.0009732 | 0.0024699 | -0.394 | 0.693574 | |
| pr_num_commits | -0.2191468 | 0.0024987 | -87.703 | < 2e-16 | *** |
| prs_eth_7Black | -0.0853233 | 0.0518940 | -1.644 | 0.100138 | |
| prs_eth_7API | -0.0842905 | 0.0131522 | -6.409 | 1.47e-10 | *** |
| prs_eth_7Hispanic | -0.0643125 | 0.0191048 | -3.366 | 0.000762 | *** |
| prs_experience | -0.0767884 | 0.0072556 | -10.583 | < 2e-16 | *** |
| pr_nth | 0.5245601 | 0.0068901 | 76.133 | < 2e-16 | *** |
| prs_continentAsia | -0.1003807 | 0.0152496 | -6.583 | 4.63e-11 | *** |
| prs_continentAfrica | -0.2046389 | 0.0517682 | -3.953 | 7.72e-05 | *** |
| prs_continentSouth America | -0.0693287 | 0.0293410 | -2.363 | 0.018134 | * |
| prs_continentAntarctica | -0.5873907 | 0.5158823 | -1.139 | 0.254864 | |
| prs_continentUnknown | -0.0979492 | 0.0122783 | -7.977 | 1.49e-15 | *** |
| prs_continentEurope | 0.0773230 | 0.0107322 | 7.205 | 5.81e-13 | *** |
| prs_continentAustralia | 0.0547821 | 0.0256006 | 2.140 | 0.032365 | * |
| prs_pri_same_nationalityDifferent | -0.2059487 | 0.0094986 | -21.682 | < 2e-16 | *** |
| prs_pri_same_nationalityUnknown | -0.0071342 | 0.0110717 | -0.644 | 0.519342 | |
| intra_branch1 | 0.2567086 | 0.0134809 | 19.042 | < 2e-16 | *** |

MODEL Submitter_09 #####
 ### All Ethnicities (threshold 0.9) #####

Generalized linear mixed model fit by maximum likelihood (Laplace Approximation) [glmerMod']

Family: binomial (logit)

Formula: pr_status ~ repo_pr_tenure_mnth + repo_pr_popularity + repo_pr_team_size +

perc_external_contribs + prs_succ_rate + pr_files_changed +
 prs_main_team_member + prs_popularity + prs_watched_repo +
 prs_tenure_mnth + pr_comments_counts + pr_num_commits + prs_eth_9 +
 prs_experience + pr_nth + prs_continent + prs_pri_same_nationality +
 intra_branch + (1 | prs_id) + (1 | repo_id) Data: eth_09_EU

Control: glmerControl(optimizer = "nloptwrap", calc.derivs = FALSE, optCtrl = list(maxeval = 50))

AIC BIC logLik deviance df.resid
 888895.7 889258.0 -444417.8 888835.7 1298295

Scaled residuals:

Min 1Q Median 3Q Max
 -22.891 0.108 0.223 0.378 187.550

Random effects:

Groups Name Variance Std.Dev.

prs_id (Intercept) 0.6639 0.8148

repo_id (Intercept) 1.9761 1.4058

Number of obs: 1298325, groups: prs_id, 178304; repo_id, 28572

Fixed effects:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------------|------------|------------|---------|--------------|
| (Intercept) | 2.270e+00 | 1.870e-02 | 121.407 | < 2e-16 *** |
| repo_pr_tenure_mnth | 2.102e-02 | 6.671e-03 | 3.150 | 0.00163 ** |
| repo_pr_popularity | 7.928e-02 | 1.041e-02 | 7.619 | 2.56e-14 *** |
| repo_pr_team_size | 7.375e-18 | 1.057e-02 | 0.000 | 1.00000 |
| perc_external_contribs | -5.831e-02 | 5.378e-03 | -10.844 | < 2e-16 *** |
| prs_succ_rate | 1.904e-01 | 4.110e-03 | 46.324 | < 2e-16 *** |
| pr_files_changed | -3.512e-04 | 2.443e-05 | -14.377 | < 2e-16 *** |
| prs_main_team_member1 | 1.417e-01 | 2.774e-02 | 5.106 | 3.29e-07 *** |
| prs_popularity | 8.724e-02 | 5.911e-03 | 14.760 | < 2e-16 *** |
| prs_watched_repo1 | 8.634e-02 | 8.416e-03 | 10.259 | < 2e-16 *** |
| prs_tenure_mnth | 4.533e-02 | 4.854e-03 | 9.338 | < 2e-16 *** |
| pr_comments_counts | -3.693e-04 | 2.994e-03 | -0.123 | 0.90184 |
| pr_num_commits | -2.107e-01 | 3.042e-03 | -69.256 | < 2e-16 *** |
| prs_eth_9Black | -5.826e-02 | 1.011e-01 | -0.576 | 0.56429 |
| prs_eth_9API | -1.019e-01 | 1.606e-02 | -6.345 | 2.22e-10 *** |
| prs_eth_9Hispanic | -7.910e-02 | 2.595e-02 | -3.048 | 0.00230 ** |
| prs_experience | -7.223e-02 | 8.638e-03 | -8.362 | < 2e-16 *** |
| prs_repo_experience | 5.080e-01 | 8.237e-03 | 61.675 | < 2e-16 *** |
| prs_continentAsia | -8.604e-02 | 1.876e-02 | -4.587 | 4.49e-06 *** |
| prs_continentAfrica | -1.917e-01 | 6.776e-02 | -2.829 | 0.00467 ** |
| prs_continentSouth America | -1.506e-02 | 4.271e-02 | -0.353 | 0.72432 |
| prs_continentAntarctica | -1.066e+00 | 5.943e-01 | -1.794 | 0.07289 . |
| prs_continentUnknown | -1.066e-01 | 1.491e-02 | -7.153 | 8.49e-13 *** |
| prs_continentEurope | 7.016e-02 | 1.252e-02 | 5.606 | 2.08e-08 *** |
| prs_continentOceania | 6.413e-02 | 3.019e-02 | 2.124 | 0.03368 * |
| prs_pri_same_nationalityDifferent | -2.051e-01 | 1.130e-02 | -18.143 | < 2e-16 *** |
| prs_pri_same_nationalityUnknown | 1.226e-02 | 1.350e-02 | 0.908 | 0.36389 |
| intra_branch1 | 2.829e-01 | 1.613e-02 | 17.536 | < 2e-16 *** |

**** Effect Size for MODEL Submitter_08

Analysis of Variance Table. 22463.1

| | Df | Sum Sq | Mean Sq | F value |
|--------------------------|----------|--------------|-------------|----------------|
| repo_pr_tenure_mnth | 1 | 618.8 | 618.8 | 618.7820 |
| repo_pr_popularity | 1 | 37.1 | 37.1 | 37.0634 |
| repo_pr_team_size | 1 | 33.4 | 33.4 | 33.4412 |
| perc_external_contribs | 1 | 8.3 | 8.3 | 8.2808 |
| prs_succ_rate | 1 | 7098.8 | 7098.8 | 7098.8066 |
| pr_files_changed | 1 | 599.2 | 599.2 | 599.1823 |
| prs_main_team_member | 1 | 369.6 | 369.6 | 369.5689 |
| prs_popularity | 1 | 806.5 | 806.5 | 806.5356 |
| prs_watched_repo | 1 | 618.7 | 618.7 | 618.7372 |
| prs_tenure_mnth | 1 | 135.5 | 135.5 | 135.4551 |
| pr_comments_counts | 1 | 178.0 | 178.0 | 178.0347 |
| pr_num_commits | 1 | 4643.7 | 4643.7 | 4643.6755 |
| prs_eth_8 | 3 | 133.6 | 44.5 | 44.5430 |
| prs_experience | 1 | 1545.1 | 1545.1 | 1545.0961 |
| pr_nth | 1 | 4682.2 | 4682.2 | 4682.1701 |
| prs_continent | 7 | 109.7 | 15.7 | 15.6779 |
| prs_pri_same_nationality | 2 | 464.2 | 232.1 | 232.0784 |
| intra_branch | 1 | 380.7 | 380.7 | 380.7224 |

**** Effect Size for MODELS RQ2

Same_ethnicity_Hispanic:

Analysis of Variance Table

| | Df | Sum Sq | Mean Sq | F value |
|--------------------------|----|---------|---------|----------|
| repo_pr_tenure_mnth | 1 | 1.857 | 1.857 | 1.8571 |
| repo_pr_popularity | 1 | 19.577 | 19.577 | 19.5774 |
| repo_pr_team_size | 1 | 21.452 | 21.452 | 21.4522 |
| perc_external_contribs | 1 | 0.298 | 0.298 | 0.2981 |
| prs_succ_rate | 1 | 221.960 | 221.960 | 221.9603 |
| pr_files_changed | 1 | 35.148 | 35.148 | 35.1482 |
| prs_main_team_member | 1 | 27.748 | 27.748 | 27.7480 |
| prs_popularity | 1 | 1.074 | 1.074 | 1.0736 |
| prs_watched_repo | 1 | 10.428 | 10.428 | 10.4279 |
| prs_tenure_mnth | 1 | 21.414 | 21.414 | 21.4135 |
| pr_comments_counts | 1 | 3.804 | 3.804 | 3.8035 |
| pr_num_commits | 1 | 159.535 | 159.535 | 159.5353 |
| prs_experience | 1 | 15.498 | 15.498 | 15.4984 |
| pr_nth | 1 | 190.166 | 190.166 | 190.1659 |
| prs_continent | 6 | 11.921 | 1.987 | 1.9869 |
| prs_pri_same_nationality | 2 | 55.673 | 27.837 | 27.8367 |
| intra_branch | 1 | 25.247 | 25.247 | 25.2468 |
| same_eth | 1 | 59.559 | 59.559 | 59.5590 |

Same_ethnicity_API:

Analysis of Variance Table

| | Df | Sum Sq | Mean Sq | F value |
|--------------------------|----|--------|---------|----------|
| repo_pr_tenure_mnth | 1 | 3.59 | 3.59 | 3.5889 |
| repo_pr_popularity | 1 | 48.27 | 48.27 | 48.2715 |
| repo_pr_team_size | 1 | 21.36 | 21.36 | 21.3568 |
| perc_external_contribs | 1 | 3.16 | 3.16 | 3.1621 |
| prs_succ_rate | 1 | 701.86 | 701.86 | 701.8559 |
| pr_files_changed | 1 | 42.76 | 42.76 | 42.7621 |
| prs_main_team_member | 1 | 5.92 | 5.92 | 5.9164 |
| prs_popularity | 1 | 137.08 | 137.08 | 137.0771 |
| prs_watched_repo | 1 | 41.91 | 41.91 | 41.9130 |
| prs_tenure_mnth | 1 | 35.98 | 35.98 | 35.9826 |
| pr_comments_counts | 1 | 3.58 | 3.58 | 3.5842 |
| pr_num_commits | 1 | 451.62 | 451.62 | 451.6243 |
| prs_experience | 1 | 86.44 | 86.44 | 86.4407 |
| pr_nth | 1 | 251.04 | 251.04 | 251.0424 |
| prs_continent | 7 | 28.17 | 4.02 | 4.0240 |
| prs_pri_same_nationality | 2 | 65.64 | 32.82 | 32.8182 |
| intra_branch | 1 | 1.09 | 1.09 | 1.0902 |
| same_eth | 1 | 61.09 | 61.09 | 61.0852 |

Same_ethnicity_Black:

| | Df | Sum Sq | Mean Sq | F value |
|--------------------------|----|---------|---------|---------|
| repo_pr_tenure_mnth | 1 | 0.9389 | 0.9389 | 0.9389 |
| repo_pr_popularity | 1 | 10.1960 | 10.1960 | 10.1960 |
| repo_pr_team_size | 1 | 1.9595 | 1.9595 | 1.9595 |
| perc_external_contribs | 1 | 5.8985 | 5.8985 | 5.8985 |
| prs_succ_rate | 1 | 15.1695 | 15.1695 | 15.1695 |
| pr_files_changed | 1 | 0.1448 | 0.1448 | 0.1448 |
| prs_main_team_member | 1 | 1.2900 | 1.2900 | 1.2900 |
| prs_popularity | 1 | 2.0607 | 2.0607 | 2.0607 |
| prs_watched_repo | 1 | 0.0490 | 0.0490 | 0.0490 |
| prs_tenure_mnth | 1 | 0.0203 | 0.0203 | 0.0203 |
| pr_comments_counts | 1 | 0.2329 | 0.2329 | 0.2329 |
| pr_num_commits | 1 | 12.9496 | 12.9496 | 12.9496 |
| prs_experience | 1 | 2.4135 | 2.4135 | 2.4135 |
| pr_nth | 1 | 16.2906 | 16.2906 | 16.2906 |
| prs_continent | 6 | 11.7565 | 1.9594 | 1.9594 |
| prs_pri_same_nationality | 2 | 1.0146 | 0.5073 | 0.5073 |
| intra_branch | 1 | 1.0447 | 1.0447 | 1.0447 |
| same_eth | 1 | 3.9419 | 3.9419 | 3.9419 |