

## Without Unknown Integrators or Submitters

### Base MODEL #####

	Estimate	Std. Error	z	value	Pr(> z )
(Intercept)	2.233e+00	1.774e-02	125.838	< 2e-16	***
repo_pr_tenure_mnth	1.047e-02	6.326e-03	1.655	0.09800	.
repo_pr_popularity	0.000e+00	9.869e-03	0.000	1.00000	
repo_pr_team_size	1.282e-02	9.924e-03	1.292	0.19627	
perc_external_contribs	-2.677e-02	5.027e-03	-5.326	1.00e-07	***
prs_succ_rate	1.813e-01	3.905e-03	46.423	< 2e-16	***
pr_files_changed	-3.560e-04	2.459e-05	-14.476	< 2e-16	***
prs_main_team_member1	1.619e-01	2.625e-02	6.166	7.00e-10	***
prs_popularity	8.210e-02	5.662e-03	14.500	< 2e-16	***
prs_watched_repo1	7.142e-02	7.996e-03	8.932	< 2e-16	***
prs_followed_pr1	1.724e-01	1.050e-02	16.417	< 2e-16	***
prs_tenure_mnth	3.389e-02	4.750e-03	7.135	9.68e-13	***
pr_comments_counts	1.236e-03	2.877e-03	0.430	0.66738	
pr_num_commits	-2.113e-01	2.914e-03	-72.491	< 2e-16	***
prs_experience	-6.888e-02	8.206e-03	-8.394	< 2e-16	***
pr_nth	4.976e-01	7.878e-03	63.167	< 2e-16	***
prs_continentAsia	-1.151e-01	1.712e-02	-6.722	1.79e-11	***
prs_continentAfrica	-1.784e-01	6.099e-02	-2.926	0.00344	**
prs_continentSouth America	-8.319e-02	3.346e-02	-2.486	0.01291	*
prs_continentAntarctica	1.798e-01	8.683e-01	0.207	0.83594	
prs_continentUnknown	8.442e-02	1.438e-02	5.871	4.34e-09	***
prs_continentEurope	7.639e-02	1.167e-02	6.545	5.96e-11	***
prs_continentOceania	5.276e-02	2.769e-02	1.905	0.05675	.
prs_pri_same_nationalityDifferent	-2.015e-01	1.056e-02	-19.090	< 2e-16	***
prs_pri_same_nationalityUnknown	-1.959e-01	1.308e-02	-14.977	< 2e-16	***
intra_branch1	2.945e-01	1.537e-02	19.152	< 2e-16	***

### MODEL Submitter\_08

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### All Ethnicities (threshold 0.8) , No Same ethnicity #####

	Estimate	Std. Error	z	value	Pr(> z )
(Intercept)	2.244e+00	1.781e-02	126.028	< 2e-16	***
repo_pr_tenure_mnth	1.115e-02	6.327e-03	1.763	0.07792	.
repo_pr_popularity	0.000e+00	9.871e-03	0.000	1.00000	
repo_pr_team_size	1.397e-02	9.926e-03	1.407	0.15931	
perc_external_contribs	-2.672e-02	5.027e-03	-5.315	1.06e-07	***
prs_succ_rate	1.810e-01	3.905e-03	46.358	< 2e-16	***
pr_files_changed	-3.558e-04	2.459e-05	-14.468	< 2e-16	***
prs_main_team_member1	1.609e-01	2.625e-02	6.130	8.81e-10	***
prs_popularity	8.320e-02	5.663e-03	14.691	< 2e-16	***
prs_watched_repo1	7.134e-02	7.996e-03	8.922	< 2e-16	***
prs_followed_pr1	1.741e-01	1.050e-02	16.578	< 2e-16	***
prs_tenure_mnth	3.237e-02	4.756e-03	6.806	1.00e-11	***
pr_comments_counts	1.268e-03	2.877e-03	0.441	0.65931	
pr_num_commits	-2.112e-01	2.915e-03	-72.454	< 2e-16	***
<b>prs_eth_8Black</b>	<b>-5.498e-02</b>	<b>9.627e-02</b>	<b>-0.571</b>	<b>0.56793</b>	
<b>prs_eth_8API</b>	<b>-1.093e-01</b>	<b>1.521e-02</b>	<b>-7.182</b>	<b>6.89e-13</b>	***
<b>prs_eth_8Hispanic</b>	<b>-6.831e-02</b>	<b>2.226e-02</b>	<b>-3.068</b>	<b>0.00215</b>	**
prs_experience	-7.051e-02	8.209e-03	-8.589	< 2e-16	***
pr_nth	4.983e-01	7.878e-03	63.248	< 2e-16	***
prs_continentAsia	-7.518e-02	1.810e-02	-4.153	3.28e-05	***
prs_continentAfrica	-1.817e-01	6.147e-02	-2.956	0.00312	**
prs_continentSouth America	-6.040e-02	3.485e-02	-1.733	0.08311	.
prs_continentAntarctica	1.758e-01	8.670e-01	0.203	0.83932	
prs_continentUnknown	8.721e-02	1.439e-02	6.062	1.35e-09	***
prs_continentEurope	7.107e-02	1.170e-02	6.075	1.24e-09	***
prs_continentOceania	5.147e-02	2.770e-02	1.858	0.06314	.
prs_pri_same_nationalityDifferent	-2.011e-01	1.056e-02	-19.047	< 2e-16	***
prs_pri_same_nationalityUnknown	-1.955e-01	1.308e-02	-14.946	< 2e-16	***
intra_branch1	2.944e-01	1.538e-02	19.147	< 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	28	964931	965271	-482438	964875				
<b>model_submitter_EU</b>	<b>31</b>	<b>964876</b>	<b>965253</b>	<b>-482407</b>	<b>964814</b>	<b>60.814</b>	<b>3</b>	<b>3.939e-13</b>	<b>***</b>

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### MODEL Submitter_08 NO association #####
### All Ethnicities (threshold 0.8), No Same ethnicity, no association #####

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	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	***
<b>prs_eth_8Black</b>	<b>-4.986e-02</b>	<b>9.633e-02</b>	<b>-0.518</b>	<b>0.604737</b>	
<b>prs_eth_8API</b>	<b>-1.042e-01</b>	<b>1.522e-02</b>	<b>-6.845</b>	<b>7.67e-12</b>	***
<b>prs_eth_8Hispanic</b>	<b>-6.522e-02</b>	<b>2.227e-02</b>	<b>-2.928</b>	<b>0.003408</b>	**
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_continentOceania	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 association and without association variable.

	Df	AIC	BIC	logLik	deviance	Chisq	Chi	Df	Pr(>Chisq)
model_submitter_EU_NoAss.	30	965170	965535	-482555	965110				
<b>model_submitter_EU</b>	<b>31</b>	<b>964876</b>	<b>965253</b>	<b>-482407</b>	<b>964814</b>	<b>296.11</b>	<b>1</b>	<b>&lt; 2.2e-16</b>	<b>***</b>

### MODEL Submitter\_08 Interaction prs\*pri #####  
 ### All Ethnicities (threshold 0.8), No Same ethnicity, no association #####

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	2.236e+00	1.787e-02	125.084	< 2e-16	***
repo_pr_tenure_mnth	1.149e-02	6.327e-03	1.816	0.069382	.
repo_pr_popularity	0.000e+00	9.870e-03	0.000	1.000000	
repo_pr_team_size	1.364e-02	9.927e-03	1.374	0.169595	
perc_external_contribs	-2.652e-02	5.028e-03	-5.275	1.32e-07	***
prs_succ_rate	1.810e-01	3.906e-03	46.347	< 2e-16	***
pr_files_changed	-3.553e-04	2.457e-05	-14.462	< 2e-16	***
prs_main_team_member1	1.600e-01	2.625e-02	6.096	1.09e-09	***
prs_popularity	8.342e-02	5.664e-03	14.728	< 2e-16	***
prs_watched_repo1	7.175e-02	7.997e-03	8.972	< 2e-16	***
prs_followed_pr1	1.731e-01	1.051e-02	16.474	< 2e-16	***
prs_tenure_mnth	3.239e-02	4.757e-03	6.809	9.83e-12	***
pr_comments_counts	1.138e-03	2.877e-03	0.395	0.692558	
pr_num_commits	-2.114e-01	2.915e-03	-72.517	< 2e-16	***
prs_eth_8Black	-8.211e-02	9.989e-02	-0.822	0.411100	
prs_eth_8API	-1.449e-01	1.595e-02	-9.084	< 2e-16	***
prs_eth_8Hispanic	-8.687e-02	2.323e-02	-3.740	0.000184	***
pri_eth_8Black	2.682e-01	2.044e-01	1.312	0.189456	
pri_eth_8API	4.959e-02	2.087e-02	2.376	0.017516	*
pri_eth_8Hispanic	-1.267e-01	2.124e-02	-5.965	2.45e-09	***
prs_experience	-7.097e-02	8.210e-03	-8.645	< 2e-16	***
pr_nth	4.980e-01	7.880e-03	63.197	< 2e-16	***
prs_continentAsia	-7.997e-02	1.811e-02	-4.414	1.01e-05	***
prs_continentAfrica	-1.838e-01	6.150e-02	-2.989	0.002799	**
prs_continentSouth America	-6.542e-02	3.487e-02	-1.876	0.060671	.
prs_continentAntarctica	1.721e-01	8.666e-01	0.199	0.842583	
prs_continentUnknown	8.187e-02	1.440e-02	5.685	1.31e-08	***
prs_continentEurope	6.835e-02	1.170e-02	5.840	5.22e-09	***
prs_continentOceania	4.900e-02	2.770e-02	1.769	0.076939	.
prs_pri_same_nationalityDifferent	-1.916e-01	1.060e-02	-18.071	< 2e-16	***
prs_pri_same_nationalityUnknown	-1.846e-01	1.312e-02	-14.066	< 2e-16	***
intra_branch1	2.935e-01	1.538e-02	19.081	< 2e-16	***
prs_eth_8Black:pri_eth_8Black	1.700e+00	1.123e+00	1.514	0.129933	
prs_eth_8API:pri_eth_8Black	-7.917e-01	5.522e-01	-1.434	0.151646	
prs_eth_8Hispanic:pri_eth_8Black	8.431e-02	6.276e-01	0.134	0.893128	
prs_eth_8Black:pri_eth_8API	6.395e-01	3.834e-01	1.668	0.095310	.
prs_eth_8API:pri_eth_8API	2.267e-01	3.685e-02	6.152	7.63e-10	***
prs_eth_8Hispanic:pri_eth_8API	-5.519e-01	7.476e-02	-7.383	1.55e-13	***
prs_eth_8Black:pri_eth_8Hispanic	-5.944e-01	3.594e-01	-1.654	0.098128	.
prs_eth_8API:pri_eth_8Hispanic	1.453e-01	5.098e-02	2.850	0.004376	**
prs_eth_8Hispanic:pri_eth_8Hispanic	5.480e-01	6.218e-02	8.812	< 2e-16	***

### Comparing submitter model with interaction and without interaction prs\*pri.

	Df	AIC	BIC	logLik	deviance	Chisq	Chi	Df	Pr(>Chisq)
model_submitter_EU	31	964876	965253	-482407	964814				
model_submitter_EU_Inter.	43	964631	965154	-482273	964545	269.1112	< 2.2e-16	***	

### MODEL Submitter\_07. #####  
 ### All Ethnicities (threshold 0.7) and No Same ethnicity #####

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	2.310e+00	1.651e-02	139.908	< 2e-16	***
repo_pr_tenure_mnth	-7.904e-03	5.648e-03	-1.399	0.1617	
repo_pr_popularity	9.081e-02	8.887e-03	10.219	< 2e-16	***
repo_pr_team_size	0.000e+00	8.960e-03	0.000	1.0000	
perc_external_contribs	-4.696e-02	4.469e-03	-10.508	< 2e-16	***
prs_succ_rate	1.876e-01	3.391e-03	55.324	< 2e-16	***
pr_files_changed	-3.569e-04	1.971e-05	-18.108	< 2e-16	***
prs_main_team_member1	1.436e-01	2.357e-02	6.095	1.10e-09	***
prs_popularity	8.744e-02	4.953e-03	17.653	< 2e-16	***
prs_watched_repo1	7.768e-02	6.985e-03	11.122	< 2e-16	***
prs_followed_pr1	1.264e-01	9.188e-03	13.756	< 2e-16	***
prs_tenure_mnth	5.508e-02	3.911e-03	14.081	< 2e-16	***
pr_comments_counts	-1.003e-03	2.470e-03	-0.406	0.6847	
pr_num_commits	-2.197e-01	2.499e-03	-87.896	< 2e-16	***
<b>prs_eth_7Black</b>	<b>-8.904e-02</b>	<b>5.187e-02</b>	<b>-1.717</b>	<b>0.0860</b>	.
<b>prs_eth_7API</b>	<b>-8.775e-02</b>	<b>1.315e-02</b>	<b>-6.674</b>	<b>2.49e-11</b>	***
<b>prs_eth_7Hispanic</b>	<b>-6.647e-02</b>	<b>1.910e-02</b>	<b>-3.481</b>	<b>0.0005</b>	***
prs_experience	-7.344e-02	7.258e-03	-10.118	< 2e-16	***
pr_nth	5.163e-01	6.915e-03	74.661	< 2e-16	***
prs_continentAsia	-1.053e-01	1.525e-02	-6.906	4.99e-12	***
prs_continentAfrica	-2.128e-01	5.174e-02	-4.113	3.91e-05	***
prs_continentSouth America	-7.459e-02	2.933e-02	-2.543	0.0110	*
prs_continentAntarctica	-6.099e-01	5.151e-01	-1.184	0.2364	
prs_continentUnknown	-1.006e-01	1.227e-02	-8.193	2.55e-16	***
prs_continentEurope	7.475e-02	1.073e-02	6.967	3.24e-12	***
prs_continentOceania	5.374e-02	2.559e-02	2.100	0.0357	*
prs_pri_same_nationalityDifferent	-1.995e-01	9.507e-03	-20.984	< 2e-16	***
prs_pri_same_nationalityUnknown	2.337e-03	1.109e-02	0.211	0.8331	
intra_branch1	2.524e-01	1.349e-02	18.713	< 2e-16	***

### MODEL Submitter\_09 #####  
 ### All Ethnicities (threshold 0.9) and No Same ethnicity #####

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	2.247e+00	1.878e-02	119.649	< 2e-16	***
repo_pr_tenure_mnth	2.292e-02	6.673e-03	3.435	0.000594	***
repo_pr_popularity	8.206e-02	1.041e-02	7.884	3.16e-15	***
repo_pr_team_size	7.343e-18	1.057e-02	0.000	1.000000	
perc_external_contribs	-5.882e-02	5.378e-03	-10.937	< 2e-16	***
prs_succ_rate	1.897e-01	4.110e-03	46.143	< 2e-16	***
pr_files_changed	-3.512e-04	2.446e-05	-14.362	< 2e-16	***
prs_main_team_member1	1.379e-01	2.775e-02	4.971	6.65e-07	***
prs_popularity	7.974e-02	5.941e-03	13.424	< 2e-16	***
prs_watched_repo1	7.798e-02	8.442e-03	9.237	< 2e-16	***
prs_followed_pr1	1.319e-01	1.112e-02	11.865	< 2e-16	***
prs_tenure_mnth	4.737e-02	4.855e-03	9.755	< 2e-16	***
pr_comments_counts	-3.991e-04	2.994e-03	-0.133	0.893970	
pr_num_commits	-2.113e-01	3.043e-03	-69.432	< 2e-16	***
<b>prs_eth_9Black</b>	<b>-6.474e-02</b>	<b>1.010e-01</b>	<b>-0.641</b>	<b>0.521563</b>	
<b>prs_eth_9API</b>	<b>-1.059e-01</b>	<b>1.606e-02</b>	<b>-6.595</b>	<b>4.26e-11</b>	***
<b>prs_eth_9Hispanic</b>	<b>-8.226e-02</b>	<b>2.594e-02</b>	<b>-3.171</b>	<b>0.001521</b>	**
prs_experience	-6.903e-02	8.640e-03	-7.990	1.35e-15	***
pr_nth	4.994e-01	8.267e-03	60.414	< 2e-16	***
prs_continentAsia	-9.123e-02	1.875e-02	-4.865	1.15e-06	***
prs_continentAfrica	-1.999e-01	6.774e-02	-2.952	0.003159	**
prs_continentSouth America	-2.165e-02	4.269e-02	-0.507	0.612041	
prs_continentAntarctica	-1.084e+00	5.929e-01	-1.828	0.067614	.
prs_continentUnknown	-1.096e-01	1.490e-02	-7.354	1.92e-13	***
prs_continentEurope	6.715e-02	1.251e-02	5.366	8.05e-08	***
prs_continentOceania	6.321e-02	3.018e-02	2.094	0.036244	*
prs_pri_same_nationalityDifferent	-1.981e-01	1.131e-02	-17.515	< 2e-16	***
prs_pri_same_nationalityUnknown	2.262e-02	1.352e-02	1.673	0.094419	.
intra_branch1	2.788e-01	1.614e-02	17.277	< 2e-16	***

#### \*\*\*\* Effect Size for MODEL Submitter\_08

Analysis of Variance Table. 22707.8

	Df	Sum Sq	Mean Sq	F value
repo_pr_tenure_mnth	1	600.2	600.2	600.1593
repo_pr_popularity	1	31.9	31.9	31.9431
repo_pr_team_size	1	33.6	33.6	33.5870
perc_external_contribs	1	8.4	8.4	8.3764
prs_succ_rate	1	7099.8	7099.8	7099.7718
pr_files_changed	1	598.1	598.1	598.1082
prs_main_team_member	1	370.1	370.1	370.0536
prs_popularity	1	803.5	803.5	803.4834
prs_watched_repo	1	618.1	618.1	618.1232
prs_followed_pri	1	538.3	538.3	538.2600
prs_tenure_mnth	1	154.9	154.9	154.9019
pr_comments_counts	1	179.9	179.9	179.9479
pr_num_commits	1	4711.9	4711.9	4711.9010
prs_eth_8	3	150.9	50.3	50.3132
prs_experience	1	1489.2	1489.2	1489.2190
pr_nth	1	4412.1	4412.1	4412.0801
prs_continent	7	118.1	16.9	16.8683
prs_pri_same_nationality	2	422.5	211.2	211.2476
intra_branch	1	366.6	366.6	366.5911

#### \*\*\*\* Effect Size for MODEL Submitter\_08 Interaction prs\*pri

Analysis of Variance Table 22307.7

	Df	Sum Sq	Mean Sq	F value
repo_pr_tenure_mnth	1	601.1	601.1	601.0588
repo_pr_popularity	1	32.0	32.0	32.0416
repo_pr_team_size	1	33.5	33.5	33.4686
perc_external_contribs	1	8.3	8.3	8.2944
prs_succ_rate	1	7094.9	7094.9	7094.9266
pr_files_changed	1	597.1	597.1	597.1434
prs_main_team_member	1	370.2	370.2	370.1619
prs_popularity	1	802.0	802.0	801.9642
prs_watched_repo	1	617.6	617.6	617.5506
prs_followed_pri	1	538.0	538.0	537.9889
prs_tenure_mnth	1	154.9	154.9	154.8713
pr_comments_counts	1	180.0	180.0	180.0481
pr_num_commits	1	4709.0	4709.0	4708.9978
prs_eth_8	3	154.8	51.6	51.6043
pri_eth_8	3	52.1	17.4	17.3831
prs_experience	1	1483.4	1483.4	1483.3899
pr_nth	1	4403.6	4403.6	4403.5919
prs_continent	7	119.7	17.1	17.0966
prs_pri_same_nationality	2	413.7	206.8	206.8485
intra_branch	1	366.7	366.7	366.6836
prs_eth_8:pri_eth_8	9	203.6	22.6	22.6230