

```
../Figures/HistogramCallsforAllNames.pdf
```

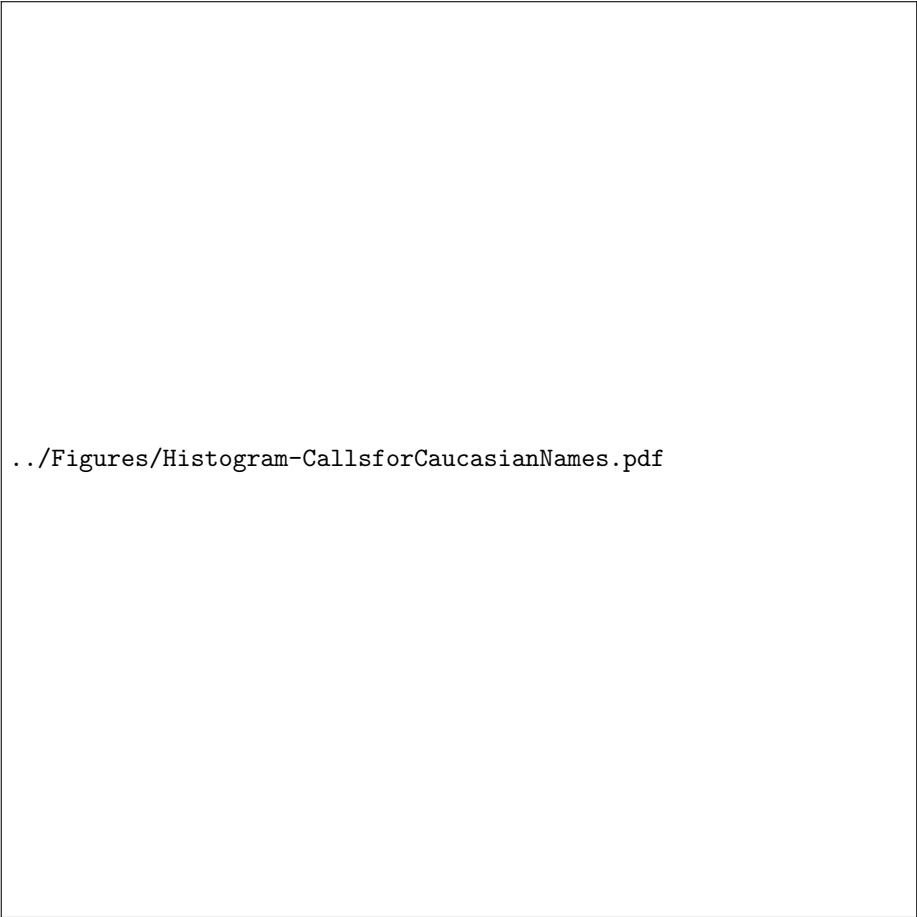
Fig. 1: Calls for All Names

1 Project Overview

This is the output of the Project Analysis R file used to run the analysis of my project.

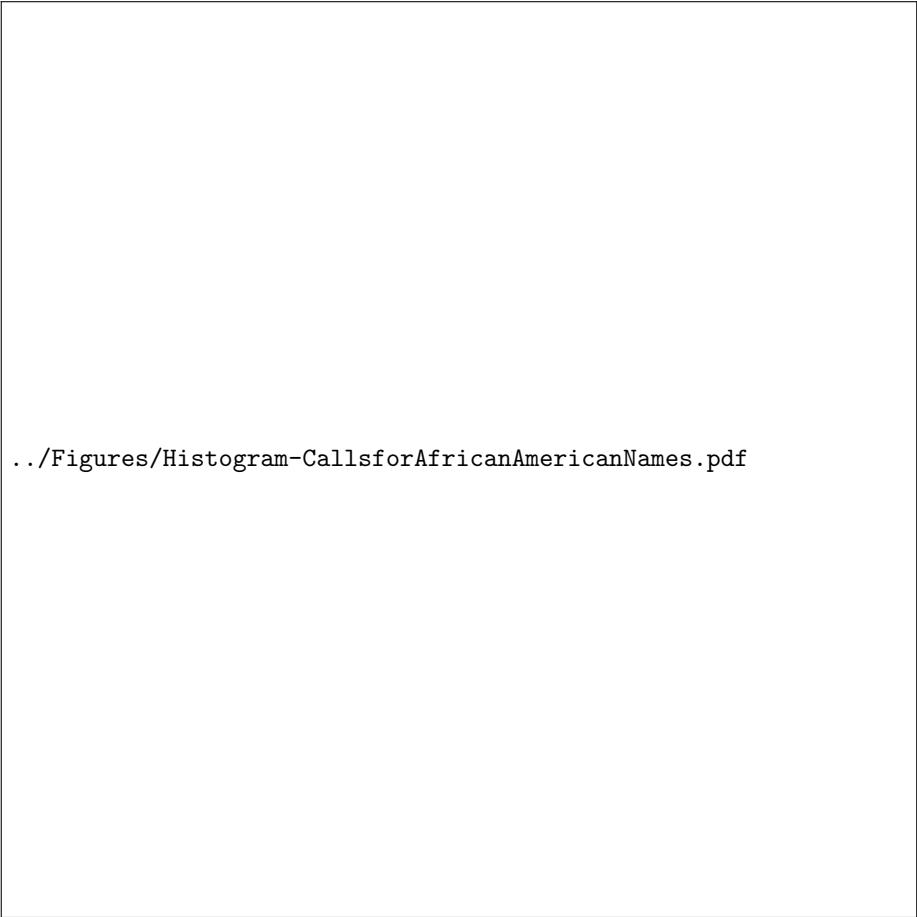
My analysis begins with some summary statistics on the dataset I chose for my project:

This gives a little insight into the data, but I will further explain here. This dataset is the result of sending 4870 randomized resumes to employers in the Chicago and Boston area for numerous jobs. What is being analyzed here? Whether or not these resumes garnered a call back based on the first name listed on the resume. Half of the resumes have what Americans would consider a white or Caucasian name, while the other half have an African American name associated with it. I am using the 'call' variable - a binary 'yes' or 'no' data



../Figures/Histogram-CallsforCaucasianNames.pdf

Fig. 2: Calls for Caucasian Names



../Figures/Histogram-CallsforAfricanAmericanNames.pdf

Fig. 3: Calls for African American Names

value - as the dependent variable for my analysis.

2 Analysis

Here are some summary statistics on the explanatory variables within this dataset that I have hand-picked from the full dataset for this project:

	name	gender	ethnicity	quality	city	jobs
X	Tamika : 256	female:3746	afam:2435	high:2446	boston :2166	Min. :1.000
X.1	Anne : 242	male :1124	cauc:2435	low :2424	chicago:2704	1st Qu.:3.000
X.2	Allison: 232					Median :4.000
X.3	Latonya: 230					Mean :3.661
X.4	Emily : 227					3rd Qu.:4.000
X.5	Latoya : 226					Max. :7.000
X.6	(Other):3457					

Tab. 1: Summary of Variables - 1

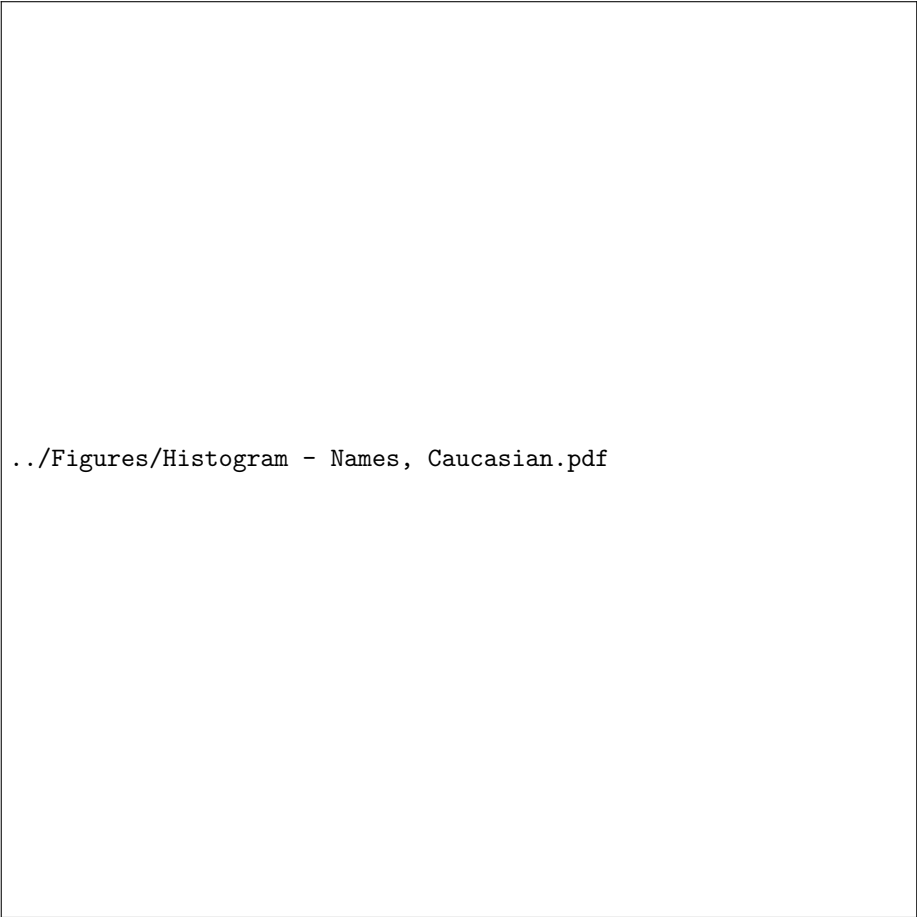
	experience	holes	computer	college	equal	minimum
X	Min. : 1.000	no :2688	no : 874	no :1366	no :3452	none :2746
X.1	1st Qu.: 5.000	yes:2182	yes:3996	yes:3504	yes:1418	some :1064
X.2	Median : 6.000					2 : 356
X.3	Mean : 7.843					3 : 331
X.4	3rd Qu.: 9.000					5 : 163
X.5	Max. :44.000					1 : 142
X.6						(Other): 68

Tab. 2: Summary of Variables - 2

	wanted	reqexp	reqeduc	reqcomp	industry
X	manager : 741	no :2750	no :4350	no :2741	business/personal services :1304
X.1	office support: 578	yes:2120	yes: 520	yes:2129	finance/insurance/real estate : 414
X.2	other : 736				health/education/social services: 754
X.3	retail sales : 818				manufacturing : 404
X.4	secretary :1621				trade :1042
X.5	supervisor : 376				transport/communication : 148
X.6					unknown : 804

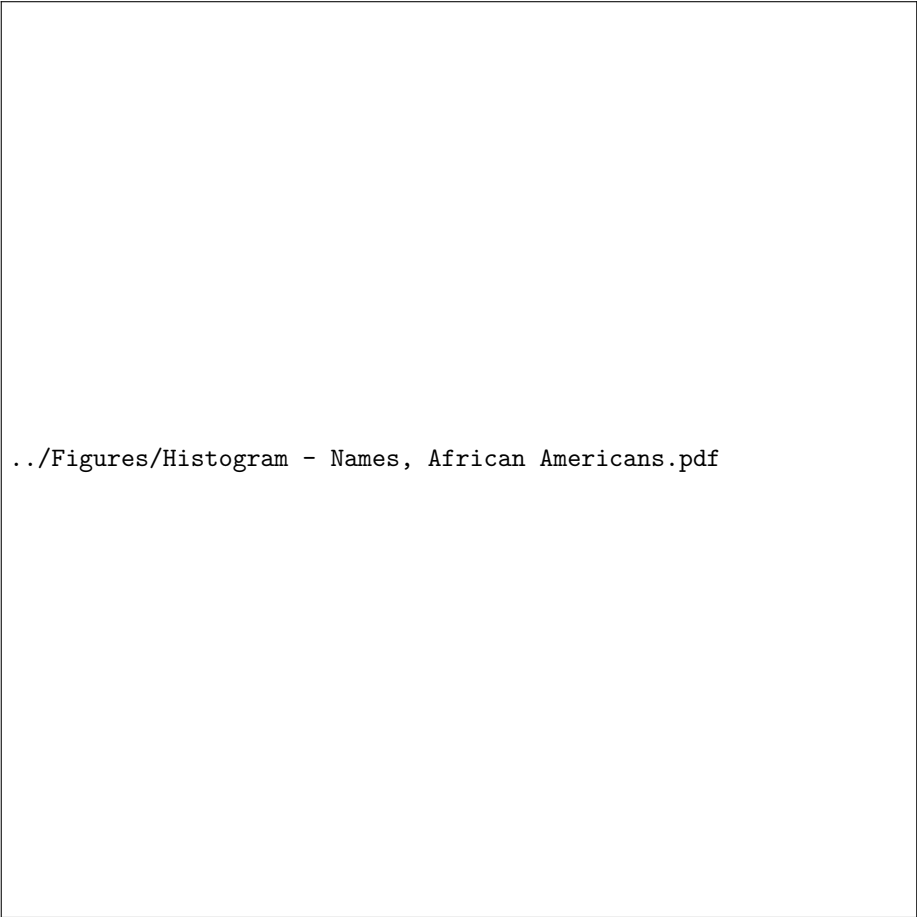
Tab. 3: Summary of Variables - 3

Just to demonstrate how randomized the resumes were when the study was conducted, I have displayed this table below. This shows all of the resumes with the name Tanisha. Each resume has its own combination of criteria:



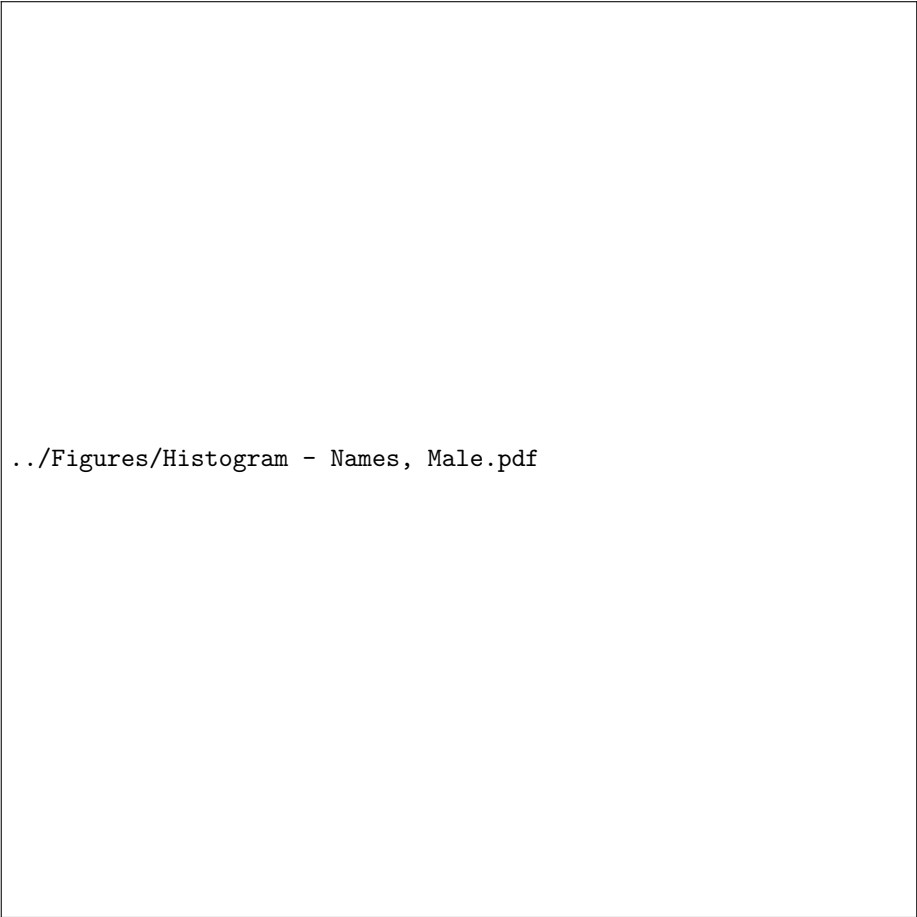
../Figures/Histogram - Names, Caucasian.pdf

Fig. 4: Histogram of Caucasian Names



../Figures/Histogram - Names, African Americans.pdf

Fig. 5: Histogram of African American Names



../Figures/Histogram - Names, Male.pdf

Fig. 6: Histogram of Male Names

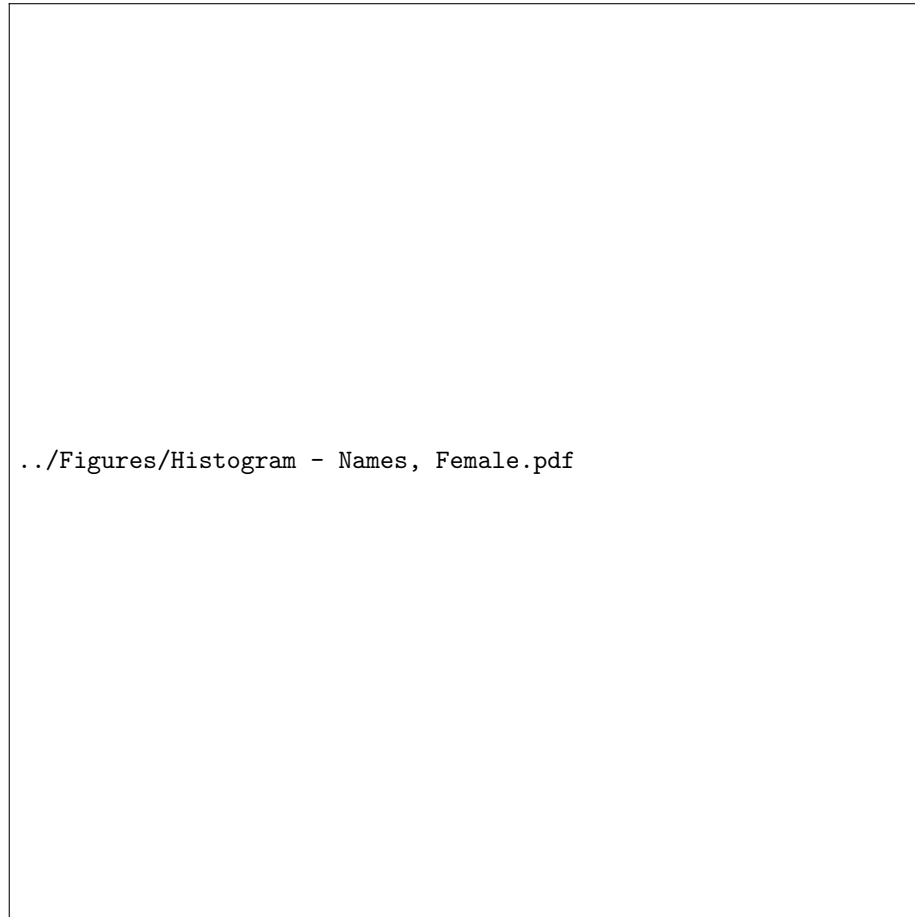


Fig. 7: Histogram of Female Names

3 Logistic Regression Model

After reviewing the data and some of the variables' statistics, I created a logistic regression model to fit to the dataset. Below are the results of the model:

Based on the p values of the model, ethnicity or gender had no significance in determining (the likelihood of receiving a call back from the employers. The most significant independent (variables were the city (primarily if the city was Chicago), the years of experience listed on (resume, and if the employer wanted to fill an office support position. (

4 Data Dictionary

For reference, here are explanations and definitions for some of the less obvious independent variables:

Name, gender, ethnicity, city, and industry are self-explanatory so I will not list those definitions. (quality = quality of resume (jobs = number of jobs listed on resume), the years of experience listed on (experience = number of years of work experience (holes = does resume have some employment holes? (computer = does resume mention some computer skills? (college = does applicant have a college degree or more? (minimum = minimum experience requirement of employer (equal = is the employer EOE (Equal Opportunity Employment)? (wanted = type of position desired by employer (reqexp = does ad mention some experience requirement? (reqeduc = does ad mention some educational requirement? (reqcomp = does ad mention some computer skills requirement? (

	name	gender	ethnicity	quality	call	city	jobs	experience	holes	computer	coll
127	Tanisha	female	afam	high	1.00	chicago	1	9	no	yes	yes
171	Tanisha	female	afam	low	0.00	chicago	2	6	no	yes	no
172	Tanisha	female	afam	low	1.00	chicago	3	11	yes	yes	no
198	Tanisha	female	afam	high	0.00	boston	4	14	no	yes	yes
199	Tanisha	female	afam	high	0.00	boston	6	8	no	yes	yes
224	Tanisha	female	afam	high	0.00	chicago	3	10	no	yes	yes
232	Tanisha	female	afam	high	0.00	chicago	4	21	yes	yes	yes
236	Tanisha	female	afam	high	0.00	chicago	3	5	no	yes	no
254	Tanisha	female	afam	low	0.00	chicago	2	13	yes	yes	yes
320	Tanisha	female	afam	high	0.00	chicago	3	6	no	yes	no
376	Tanisha	female	afam	high	0.00	boston	6	8	no	yes	yes
394	Tanisha	female	afam	low	0.00	boston	2	1	yes	yes	no
420	Tanisha	female	afam	low	0.00	boston	3	7	yes	yes	no
436	Tanisha	female	afam	high	0.00	boston	6	16	no	yes	no
472	Tanisha	female	afam	low	0.00	chicago	4	11	no	yes	no
488	Tanisha	female	afam	low	0.00	chicago	4	4	yes	yes	yes
492	Tanisha	female	afam	low	0.00	chicago	2	10	yes	yes	yes
504	Tanisha	female	afam	low	0.00	chicago	2	6	no	yes	yes
520	Tanisha	female	afam	low	0.00	chicago	4	6	no	yes	no
570	Tanisha	female	afam	low	0.00	boston	3	8	yes	no	no
592	Tanisha	female	afam	low	0.00	boston	5	13	no	yes	no
600	Tanisha	female	afam	low	0.00	boston	5	13	no	yes	no
604	Tanisha	female	afam	high	0.00	boston	4	18	yes	yes	no
654	Tanisha	female	afam	high	0.00	chicago	4	11	no	yes	yes
666	Tanisha	female	afam	low	0.00	chicago	2	3	no	yes	yes
674	Tanisha	female	afam	high	0.00	chicago	4	5	no	yes	yes
682	Tanisha	female	afam	low	0.00	chicago	4	7	no	yes	yes
694	Tanisha	female	afam	high	0.00	chicago	3	5	yes	yes	yes
723	Tanisha	female	afam	low	0.00	boston	3	10	yes	no	no
724	Tanisha	female	afam	high	0.00	boston	4	2	no	yes	yes
730	Tanisha	female	afam	low	0.00	boston	5	13	yes	yes	no
738	Tanisha	female	afam	high	0.00	boston	5	19	no	no	no
760	Tanisha	female	afam	low	0.00	chicago	4	11	yes	yes	yes
786	Tanisha	female	afam	low	0.00	chicago	5	6	yes	yes	yes
804	Tanisha	female	afam	low	0.00	chicago	2	15	no	yes	yes
824	Tanisha	female	afam	high	0.00	chicago	3	5	no	yes	no
876	Tanisha	female	afam	low	0.00	boston	5	5	yes	no	no
883	Tanisha	female	afam	low	0.00	boston	3	7	yes	no	yes
906	Tanisha	female	afam	low	0.00	chicago	4	15	yes	yes	yes
914	Tanisha	female	afam	low	0.00	chicago	2	11	yes	yes	no
968	Tanisha	female	afam	low	0.00	chicago	4	6	yes	yes	yes
972	Tanisha	female	afam	high	0.00	chicago	5	8	yes	yes	yes
1034	Tanisha	female	afam	high	0.00	boston	6	8	no	yes	yes
1066	Tanisha	female	afam	high	0.00	chicago	4	8	yes	yes	yes
1070	Tanisha	female	afam	high	0.00	chicago	3	6	no	yes	yes
1074	Tanisha	female	afam	low	0.00	chicago	4	6	no	yes	no
1102	Tanisha	female	afam	high	0.00	chicago	4	6	yes	yes	yes
1118	Tanisha	female	afam	low	0.00	chicago	2	14	no	yes	yes
1170	Tanisha	female	afam	high	0.00	boston	5	26	yes	yes	no
1178	Tanisha	female	afam	high	0.00	boston	3	7	yes	yes	yes
1186	Tanisha	female	afam	high	0.00	boston	6	16	yes	yes	no
1206	Tanisha	female	afam	low	0.00	chicago	3	6	yes	yes	yes
1218	Tanisha	female	afam	high	0.00	chicago	4	6	yes	yes	no
1222	Tanisha	female	afam	low	0.00	chicago	4	6	no	yes	no
1226	Tanisha	female	afam	low	0.00	chicago	3	8	yes	yes	no

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	21.90	18789.26	0.00	1.00
gendermale	18.44	775.34	0.02	0.98
ethnicitycauc	18.95	559.15	0.03	0.97
qualitylow	-0.26	0.17	-1.52	0.13
citychicago	-0.52	0.22	-2.40	0.02
jobs	-0.13	0.08	-1.58	0.11
experience	0.05	0.02	2.30	0.02
holesyes	-0.27	0.17	-1.57	0.12
computeryes	-0.35	0.28	-1.23	0.22
collegeyes	0.13	0.18	0.72	0.47
minimum0.5	18.25	16406.28	0.00	1.00
minimum1	-0.91	13871.32	-0.00	1.00
minimum10	-1.45	13871.32	-0.00	1.00
minimum2	0.28	13871.32	0.00	1.00
minimum3	-0.19	13871.32	-0.00	1.00
minimum4	18.26	16646.17	0.00	1.00
minimum5	-0.51	13871.32	-0.00	1.00
minimum6	-1.47	13871.32	-0.00	1.00
minimum7	-0.96	13871.32	-0.00	1.00
minimum8	18.01	16172.90	0.00	1.00
minimumnone	-19.00	18789.26	-0.00	1.00
minimumsome	-0.34	13871.32	-0.00	1.00
equalyes	-0.28	0.19	-1.52	0.13
wantedoffice support	0.70	0.35	2.03	0.04
wantedother	0.06	0.34	0.17	0.86
wantedretail sales	0.12	0.33	0.37	0.71
wantedsecretary	0.32	0.28	1.17	0.24
wantedsupervisor	0.57	0.37	1.55	0.12
reqexpyes	-18.75	12673.71	-0.00	1.00
reqeducyes	-0.20	0.25	-0.78	0.43
reqcompyes	0.23	0.20	1.16	0.25
industryfinance/insurance/real estate	0.09	0.30	0.29	0.77
industryhealth/education/social services	0.08	0.25	0.31	0.76
industrymanufacturing	-0.05	0.32	-0.15	0.88
industrytrade	0.10	0.26	0.37	0.71
industrytransport/communication	-0.49	0.45	-1.08	0.28
industryunknown	-0.02	0.25	-0.08	0.94

Tab. 5: Logistic Regression Model Summary