

Job Recruitment Success Analysis

Joel Aoto

Problem

Derive insights around if a fellow will ultimately be placed at a company and how long it will take.

1 Introduction

There are numerous ways to derive insights from the given data, so in this analysis we will focus specifically on the race and education level of applicants. This will allow us to analyze specific problems in the data and see if we can find an answer to these problems.

2 Race

The first problem we want to analyze is:

”Are applicants impacted by their race?”

This problem is naturally a very complex question and we should begin by stating that the data is not a complete depiction of an individual’s job hunt experience. For the sake of the assignment, let us argue that applicants are impacted by their race and that some races are placed at a higher rate and some are not.

2.1 Evidence

Let us generate some evidence to support our claim that applicants are impacted by their race. An easy method to support this claim is to simply show that the percentage of placed applicants are heavily skewed toward certain races. We can show this with the following figure:

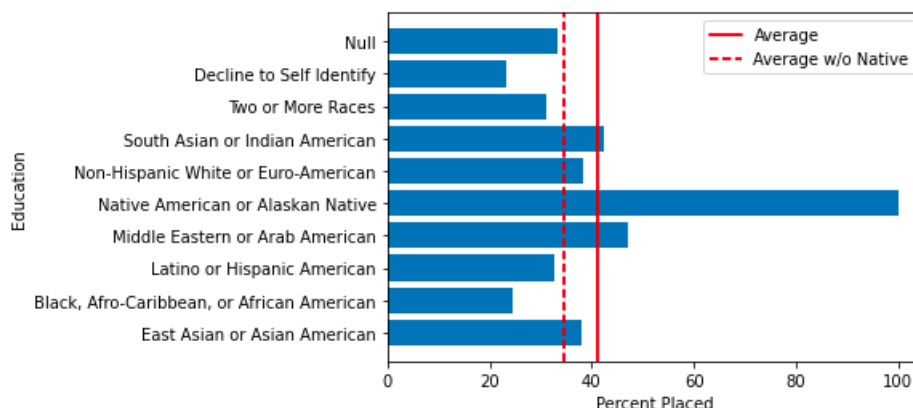


Figure 1: Percentage of Applicants Placed Sorted by Race

This figure takes each race’s percent of placement with respect to the number of applicants each race contained. These results show some interesting data, most obvious is the one hundred

percent placement of Native American or Alaskan Native applicants. This is a clear outlier in the data and is better understood when knowing that there were only three applicants of that specific race. This outlier was taken into account and thus we calculated average percent of each race with and without the outlier.

Another interesting insight from this figure is the noticeably low percent of Black, Afro-Caribbean, or African American applicants. This is a concerning insight since the percentage is nearly eight percent lower than the Latino or Hispanic American applicants despite having a somewhat similar number of applicants. As stated before this discrepancy could be the cause of multiple different factors that occur in the job search process and may not appear in the data presented. However, with the data we have we can attempt to gather insights around this problem.

2.2 Education

One possible reason that the percentage of Black, Afro-Caribbean, or African American applicants is lower compared to other races due to detracting factors elsewhere. So let us investigate the education of each race to see if there is any information we can gather. Observe the following table:

	Race	Col_Applied	HS_Applied	Col_Placed	HS_Placed	ColPCT	HSPCT
0	Black, Afro-Caribbean, or African American	111	12	26	4	23.423423	33.333333
1	East Asian or Asian American	812	64	307	26	37.807882	40.625000
2	Latino or Hispanic American	135	16	46	5	34.074074	31.250000
3	Middle Eastern or Arab American	59	6	26	5	44.067797	83.333333
4	Native American or Alaskan Native	3	0	3	0	100.000000	0.000000
5	Non-Hispanic White or Euro-American	527	35	206	10	39.089184	28.571429
6	South Asian or Indian American	493	33	210	15	42.596349	45.454545
7	Two or More Races	87	8	27	2	31.034483	25.000000
8	Decline to Self Identify	64	4	15	1	23.437500	25.000000

Figure 2: Education of Applicants Placed Sorted by Race

This table breaks down the individual races and separates them by if they have completed higher education. From this data we can see that despite having a similar percentage of higher educated applicants the Black, Afro-Caribbean, or African American applicants still have a lower percent placement. This supports the idea that these applicants are being impacted by something that is not specific to their qualifications.

2.3 Time to Placement

Seeing the discrepancies in the placement, we should look to see if the length of job search is also impacted by race. Having similar job search lengths further supports the idea that the previous discrepancies are not due to their individual efforts. We will break down each race's job search length by percent, this produces the following table:

	Race	One-Two Months	Three-Five Months	6 Months to a Year	Less than a Month	Over a Year
0	Black, Afro-Caribbean, or African American	35.483871	22.580645	3.225806	25.806452	12.903226
1	East Asian or Asian American	34.310850	17.008798	7.917889	32.258065	5.865103
2	Latino or Hispanic American	41.176471	21.568627	5.882353	31.372549	0.000000
3	Middle Eastern or Arab American	38.709677	19.354839	9.677419	29.032258	3.225806
4	Native American or Alaskan Native	66.666667	33.333333	0.000000	0.000000	0.000000
5	Non-Hispanic White or Euro-American	31.050228	17.808219	8.219178	33.789954	5.022831
6	South Asian or Indian American	30.263158	19.298246	11.842105	28.947368	3.070175
7	Two or More Races	43.333333	20.000000	3.333333	30.000000	0.000000
8	Decline to Self Identify	31.250000	6.250000	18.750000	37.500000	0.000000

Figure 3: Percentages of Each Races' Length of Job Search

From the table we can see that for the most part, many of the applicants have a similar length of job search. One notable piece of information, however, is the much larger percent of Black, Afro-Caribbean, or African American applicants that had a job search that lasted over a year. Despite this though the length of job search is fairly similar to others.

3 Conclusion

As we have seen from the data presented, we can state that there is evidence of race being an impacting factor on the applicant's placement. This is a difficult problem because there are likely many reasons that the data is portrayed in this way. In order for the people at Pathrise to continue to do their best at placing applicants into careers, more information needs to be collected about the challenges different races might face during the job search process. Information such as the "Biggest challenge in search" data is very helpful to see what the general challenges all applicants face. We can see here:

	Problems	Total Number	AF Number
0	Behavioral interviewing	60	3
1	Figuring out which jobs to apply for	186	10
2	Getting past final round interviews	294	16
3	Getting past mid-stage interviews	0	0
4	Getting past phone screens	180	12
5	Hearing back on my applications	1002	47
6	Lack of relevant experience	222	9
7	Resume gap	42	3
8	Technical interviewing	288	12
9	Technical skills	36	3

Figure 4: Number of Challenges in Total and by AFAA Applicants

Looking at this data we can see that Black, Afro-Caribbean, or African American applicants experience the same challenges as the rest of the applicants. However, there is still a need to learn more about challenges that may go beyond the application process to increase the success of all applicants.