

In our analysis process, we aimed to dig for the reasons behind the appearance of unusual points on our scatterplot matrices of five variables which are Clicks, jobagedays, descriptionLengthChars and EmployerJobCount.

At our first trial, we focused on small companies, and hence filtered the full dataset for companies that had employee count from 1-49. We believed that small companies would want to recruit more competent employees. We executed the backward elimination and forward selection to choose the best variables. The result was not satisfying because we didn't extract conclusion. Then we tried the interaction analysis of the variables. Though we did get the interaction coefficient, we were stuck on the calculation and interpretation of the interaction terms. We ran the model again and found out that the adjusted r-square was 0.0014, which indicates that the model is not useful in predicting the clicks.

At our second trial, we randomly extracted the full dataset into a dataset that contains only 1000 entries of data. Within the extracted dataset, we tried finding the relationship between clicks, job age days, description length characters and employer job count through plotting them using R. We found that there were two entries that had extremely high employer job counts. We wanted to know the reason behind this phenomenon. After considering factors such as "employerAccountDateCreated", "admin 1" and "city", we found out that the location for these two entries, Seaford, DE and Quinlan, TX, are relatively small cities with small population. Job seekers are less likely to find a job in a city that is so remote and less populated. This is why we concluded that the reason for a high employer job count for those two entries was most likely because they were re-posted regularly over a short amount of time.

From our trials, we did expect significant relationship between clicks and the length of job description. From a common sense point of view, the more detailed the description is, the more attractive the job is. However, there is no evidence indicating a linear relationship between those two variables. Statistics also indicate that whether a job requires higher education or not is also an important factor that applicants would consider before they click on the job. The linear model we ran might not explain the model efficiently. There are also other variables that need to be taken into account. Hence new models would be constructed and analyzed with other variables and statistical approaches.