

- a. Seniority based layoffs would probably have different perceived advantages and disadvantages based on the different people at a company. From the company owner's perspective, it is advantageous in the sense that it offers an easy way to determine who gets laid off first, that being the most recently hired employees, thus removing bias. It is disadvantageous in the sense that they could be laying off great young talent that could have grown to be better than most of the more tenured employees. From a senior employee's perspective, the policy is extremely advantageous, as their jobs are secure barring a bad mistake. While there doesn't seem to be many disadvantages, one could be that the senior employees would be taking on a larger workload as they get older, which may cause unhealthy stress at old ages since there is less turnover. From the perspective of the Black females in the lawsuit, the policy is extremely disadvantageous. This is because Black females were not really hired before 1964, and thus when layoffs happened, these people were the first to go, since they were the most recently hired.
- b. Just looking at data can completely obscure how we interpret data and a narrative based on that data. If we were to just look at this dataset in the lens of racism, or sexism, we couldn't find any substantial data to back up the claim of the women. The epiphany only comes when we compare the intersection of race and gender. Intersectionality helps paint a bigger picture in some datasets, and it is a good thing to keep in mind when analyzing data.
- c. To me, there is one glaring gap in the data: performance. We did not have data about how well each employee performed at the company. This may have gone into the decision to lay certain employees off, other than just seniority, sexism, or racism. This can make our conclusions less certain. Other gaps are socioeconomic backgrounds, education, salaries, etc. The data can support one thing, but if we don't know anything about how the employees actually did, or about more of their experiences, we may be missing details that led to the layoffs. In data science, oftentimes we will not have all of the data we need, which can limit the certainty of our analysis.

#### Extra Credit

1. My algorithm uses a very unbiased path to determine how to reduce costs. The main factor I considered was seniority and the role. High up roles were more secure than others, as well as people that have more tenure. All employees originally got a 20% cut on their salary, to make it a bit more fair to everyone during the recession. Managers and supervisors who were hired after 1970 received an additional cut, and janitors, assembly line workers, and upholstery workers were laid off if they were hired after 1970. For all of the remaining janitors, assembly line workers, and upholstery workers, they each had a 1 in 3 chance of being laid off. I chose these because your role can often determine your value, and I believe it is unfair to just lay off people that have been at the company for so long. I also believe that during a time of recession, it is fair to cut everyone's salary. The randomness and seniority removes subjectivity and bias.
2. Honestly, I am not too much of a fan of only using algorithms to justify decisions like this. Sometimes, like how I believe here, a case by case system is probably better. It would be more helpful to know what each employee is going through, and how good they are at their job, and how much value they bring. The risks can be pretty bad, as the wrong

people can be targeted by the algorithm. For instance, a young assembly line worker with a chance to become high up at the company, would get laid off regardless of their talent.