**Question:**

Both Ingold and Soper as well as Raghavan and Barocas consider the use of algorithms to make business-related decisions. Do you feel the uses discussed are appropriate? Are there ways to avoid potential harms in each setting? Discuss.

**Answer:**

**Raghavan and Barocas:**

In *Challenges for mitigating bias in algorithmic hiring* by Raghavan and Barocas, the main use of algorithms making business-related decisions came in the form of making hiring more efficient and cost-effective. In particular, the article dives deep into the second step of hiring which is screening/evaluating the applicants. The automated resume analysis works by having an algorithm evaluate candidate submitted resumes to produce a score indicating an applicant's quality or fit for the job. Although algorithmic screening tools seem to be entirely evidence based, there is a lot of recently found evidence that suggest these tools reproduce ,and in some cases, exacerbate human biases in data sets. In this case, I feel that the use of automated resume analysis/screening algorithms are appropriate as it is in the interest of everyone involved in the hiring process to make hiring more efficient and cost effective. However, I believe that these algorithms shouldn’t be used if there is either disparate treatment, or significant disparate impact. Luckily, as the article mentions, there is one primary remedy to this problem of algorithmic disparate impact. For example, one common approach to limit the disparate impact caused by an algorithm is to build a model, test it for disparate impact, and if disparate impact is found, remove inputs contributing to this disparate impact and rebuild the model with fewer inputs. Once this is done, repeat the process until the model makes satisfactory progress in terms of disparate impact as well as functionality.

**Ingold and Soper:**

In *Amazon Doesn’t Consider the Race of Its Customers. Should It?* By Ingold and Soper, the main use of algorithms making business-related decisions came in the form of Amazon Prime figuring out where, and where it won’t offer same day delivery. Amazon prides itself on the fact that they offer every customer the same price and service regardless of where you live, or any other personal characteristics. However, Amazon Prime hasn’t been able to live up to this standard, as in six major same-day delivery cities, the service excludes predominantly black ZIP codes to varying degrees. Amazon says its plan is to focus its same-day services on ZIP codes where Prime memberships are more concentrated, then slowly fill in the gaps when necessary. Craig Berman, Amazon’s vice president for global communications, has offered some reasons a ZIP code may be excluded. The first of these reasons being, too few Prime members to justify the expense of sending out trucks and drivers, and the next reason being the area is too far from the closest Amazon warehouse, that it wouldn’t make sense financially to have drivers travel that far for only a few orders. Since the problem of deciding which neighborhoods should get the same-day delivery service is such a complex issue, I believe the use of algorithms and models is appropriate. However, as Sorelle Friedler, a computer science professor at Haverford College who studies data bias, said in the article, “As soon as you try to represent something as complex as a neighborhood with a spreadsheet based on a few variables, you’ve made some generalizations and assumptions that may not be true, and they may not affect all people equally.” Due to the oversimplification of the problem at hand, and a lack of transparency from Amazon on how the algorithm works, it is difficult to offer an algorithmic solution to the disparate impact. The only immediate solution would be for Amazon to extend its same-day delivery services throughout the entirety of the cities that they offer the service in. Amazon has taken this solution into consideration as after the release of the article, Amazon extended its same-day delivery services in 3 out of the 6 cities mentioned in the article.