

# Portfolio 2 - Ethical Case Analysis: Breeze Dating App by Klaas-Jan Kisteman

## First impression

The ethical issue in this case [2] lies primarily in the data, not in the algorithm itself. The algorithm appears to function as intended: it learns from user preferences and predicts likely matches. However, because the underlying data reflects biased human behavior — such as preferences based on skin color or origin — the model reproduces and amplifies these biases. In other words, the algorithm is technically effective, but the problem arises from the fact that it is trained on socially biased input. This makes the ethical challenge less about a “faulty” algorithm and more about ensuring that biased data does not result in structural discrimination against certain groups.

## DAG

The DAG [1] is in Figure 1.

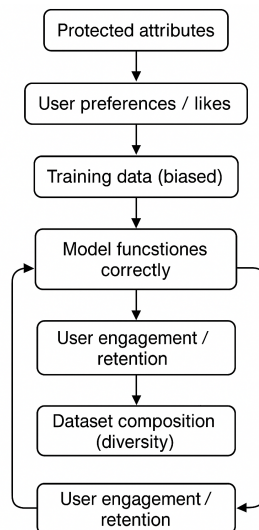


Figure 1: DAG for Breeze study

## Reflection after the DAG

Looking back at my first impression, I mainly saw the problem as biased data being fed into an otherwise well-functioning algorithm. The DAG makes clear that there are at least two additional layers I overlooked.

First, there is indirect discrimination: even though the algorithm does not directly use ethnicity

or skin color as an input, these factors are encoded through user preferences and behaviors. This means unequal treatment still emerges, but in a less visible way.

Second, the DAG shows the presence of feedback loops. Users with fewer matches are more likely to disengage or leave the platform, which reduces diversity in the dataset. This in turn strengthens the bias in future recommendations, creating a self-reinforcing cycle.

## Recommendation

For a data scientist facing this type of assignment, I recommend adopting a fairness-by-design approach. Even if the model technically functions correctly, it must be monitored and adjusted to prevent indirect discrimination.

## References (APA style)

### References

- [1] Wikipedia. (n.d.). *DAG*. In *Wikipedia, de vrije encyclopedie*. From [https://en.wikipedia.org/wiki/Directed\\_acyclic\\_graph](https://en.wikipedia.org/wiki/Directed_acyclic_graph)
- [2] Mensenrechten *Dating-app Breeze mag*. From <https://www.mensenrechten.nl/actueel/nieuws/2023/09/06/dating-app-breeze-mag-en-moet-algoritme-aanpassen-om-discriminatie-te->