1. Initial ethical assessment

The Dutch dating app Breeze uses an algorithm to automatically match users based on a calculated chance of compatibility. The algorithm does not directly use sensitive characteristics such as ethnicity or skin colour. However, research and user complaints showed that people with a non-Dutch background or darker skin tones received fewer matches and were more likely to leave the app. This raises concerns about indirect discrimination.

The main cause of this problem is likely the data used to train the algorithm. The system learns from user behaviour, such as who users choose to like. These choices already reflect social preferences and possible bias. Instead of correcting these patterns, the algorithm reinforces them. Ethically, this means that the problem is not about intention, but about impact. Even if Breeze did not intend to discriminate, the company is responsible for the effects of its algorithm. Following user preferences alone is not a sufficient ethical argument.

2. Causal diagrams (DAGs)

DAG 1 – Preference-based bias

User ethnicity → Like behaviour → Training data → Match score → Number of matches

DAG 2 – Feedback loop

Match score → User interactions → Updated training data → Match score

These diagrams show how bias can develop indirectly and become stronger over time.

3. Reflection after causal modelling

At first, the focus was mainly on unfair outcomes. After drawing the DAGs, it became clear that the issue is more structural. The feedback loop is especially important: users

who receive fewer matches interact less with the app, which gives the algorithm less data about them. This further lowers their match scores. In addition, the algorithm is difficult to explain, which makes it harder to identify and fix discrimination.

4. Recommendation to a data scientist

A data scientist working on systems like this should treat fairness as a key design requirement. This means:

- Regularly checking whether different groups receive different outcomes
- Identifying and limiting feedback loops
- Using interpretable models or fairness audits
- Working together with legal and ethical experts

Choosing not to act is also a decision. In this case, it allows discrimination to continue.

References (APA)

College voor de Rechten van de Mens. (2023). Dating-app Breeze mag (en moet) algoritme aanpassen om discriminatie te voorkomen. https://www.mensenrechten.nl

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