Algorithmic Inequality: How AI Hiring Tools Discriminate Against Women

Examining the Case of Amazon's AI Recruitment System and the Broader Impact on Gender Diversity

A Summary by Group Seminar 3 Session 3 Group 1

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From Human to Machine

Looking at the **recent history** of humans and the way we have treated one another, it is quite clear that **biases have existed for as long as humans have existed**. Whether it is **confirmation bias** [based on stereotypes and common beliefs], **selection bias** [looking at a certain group(s) of population and ignoring the rest] or **implicit bias** [unconscious favouring of certain individuals]. The developers face **challenges** when trying to find the **source of biases** and trying to fix or minimize them. The **case study** is about Amazon willing to automatize the employing process to save time and money with a ML model that analyses job applicants' resumes, using **50 000 keywords** to score applicants on a scale of five stars.

Uncovering the Bias

- Women were the **victim of the model's biasness**, the reason being the model itself was trained on job-related data **dominated by men** over the course of 10 years. Upon coming across words such as "women" in the resumes, the AI model would reject it, causing an outrage in public.

- The **target and cost function** used to supervise the learning algorithm plays a significant role in the model's design and, consequently, in its final behaviour.

Debate and Discussion

- While some argued that **all types of bias must be avoided** during a hiring process. Others thought that a limited amount of **implicit bias can be beneficial** (and sometimes necessary), especially when the company has a strong culture that needs to be adopted and fostered by all employees.

- Another scenario could be an employer prioritizing an applicant who **shares personal background experiences** (e.g., nationality, shared struggles), which could be motivated by a desire to support a positive relationship within the team. Thus, it is important to always **keep a human part** in the hiring process to keep a strong company culture and team cohesion.

What did Amazon do Wrong?

In hindsight, Amazon's actions might not have been **entirely unjustified**. The controversies surrounding the company underscore the **intricate balance** between achieving business **success** and upholding **ethical** standards. Amazon's ability to navigate these challenges while continuing to grow shows that success in the business world often requires balancing various, sometimes conflicting, **priorities**. Nevertheless, the public's outrage was understandable, as **ethical considerations should be valued** at least as much as business success.

In conclusion, **AI should complement human work** rather than completely replace humans. This will ensure that human judgment and checks are in place to prevent biases and unfairness.