

# Systematically discriminated by algorithms?

A preliminary study on the impact of AI-powered hiring tools

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## ABSTRACT

The rapid advancement of generative AI has spurred a transformative shift in economic activities in a BANI environment (acronym for Brittle, Anxious, Nonlinear and Incomprehensible). This study critically examines the effectiveness and potential of AI tools in the attraction and selection of talent, employing qualitative methodology. Through analysis, we explore how biases permeate designs and datasets and question AI's capacity to promote diversity within organizational settings. Our findings underscore the importance of employing Explainable AI (XAI) and leveraging AIs guided by Design Justice perspectives. This research grants valuable insights and recommendations informed by input from key stakeholders in AI design, data management, and People & Culture (P&C) departments.

## CCS CONCEPTS

• **Machine and Deep Learning**; • **AI**; • **Biased datasets**; • **XAI**;

## KEYWORDS

Gender bias, AI, Recruitment, DEI

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## 1 PROBLEM

Since the explosion of generative AI with the launch of ChatGPT, the economic activity that was already in the process of digitalisation and automation has undergone yet another revolution. The expansion and implications of this new disruptive technology have been recognized in various sectors, and P&C teams are not immune to these transformations. In the midst of the hype, we question and examine the utility and potential of AI tools applied in recruitment, using qualitative methodology.

Under the pretext of optimizing recruitment and increasing diversity while combating unconscious biases, there is an exponential increase in the offer of services and products with AI that tempts

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P&C departments. We propose a critical reflection, with a gender and intersectionality perspective, regarding the impact of these technologies. For this purpose, we analyze from a techno-feminist and constructivist perspective the emergence of AI: how discriminations penetrate designs [8] and datasets [3], the existing regulatory framework, and its potential as a tool to promote diversity in organizations.

## 2 QUALITATIVE APPROACH

### 2.1 Research questions

To guide the research, we pose the following questions:

- Is AI a reliable tool for diversity promotion in organizations?
- To what extent are these tools- that streamline the attraction and selection process- currently integrated?
- Are P&C professionals aware of AI biases?
- Does AI mitigate or perpetuate gender bias and inequality?

### 2.2 Intentional sampling

After a thorough literature review, we delve into the study with the input of fifteen diverse key collaborators from both the world of AI design and data management, as well as the P&C, DEI (Diversity, Equity and Inclusion) and gender related, conducting a Focus Group and nine in-depth interviews.

The diversity of the intentional sample is pivotal, encompassing predominantly women (66.7%) and a non-binary individual, within a wide age span that ranges from 18 to 65 years of age. While most of the participants self-identify themselves as white or Caucasian, we were also able to engage with some collaborators with different ethnicity and origins, such as Latin, Afro-Brazilian, or mixed-race descendants. Additionally, two participants disclosed non-normative sexual orientations and another revealed neurodiversity.

### 2.3 Thematic areas

Based on the specific objectives, we have built a tool to structure and analyze the discourse of our collaborators and operationalised the following thematic areas:

- Definition of AI;
- Digitalisation of organizations;
- Implementation level in P&C;
- AI as a diversity driving force;
- Structured Hiring;
- Gender and power, biases and discrimination;
- Ethics and regulations.

### 3 RESULTS AND ANALYSIS

As a starting point, we asked our collaborators what they understood by AI, and we observed that they generally fell into two groups. On one hand, there were **technophiles**, who used AI extensively both in their professional and personal lives and define it using words like "tool", "aid", "agility/speed". On the other hand, some contributors exhibited **technostress** or **technophobia**, and made a selective and limited use of these tools, defining AI with terms like "fragile", "anti-humanism", "fear", "barriers" or "automation bias".

In terms of implementation in P&C departments in Spain, our collaborators noted a greater acceptance of **generalist tools** like ERP, ATS or LinkedIn Recruiter, which incorporate elements of AI. However, professionals are increasingly honing their skills with generative AI to enhance efficiency and effectiveness in their roles. They also recognize AI's role in CV screening, asynchronous video interviews with AI analysis of verbal and non-verbal cues, competency assessments, and in the crafting corporate messages that build an Employer Brand.

When addressing the issue of gender bias and discrimination, we examine the **androcentrism** in technologies design spaces and misrepresentation in datasets. Lack of role models due to differential socialization impedes women's and minoritized groups participation in STEM [5]. Even those who overcome the barriers face difficulties in male-dominated organizational cultures, leading to career changes or distress at work. Insights from women with technical backgrounds are significant, revealing challenges such as the discredit of their criteria, the constant need of proving themselves and limited opportunities of promotion in their careers.

As [3] outlined when referring to **biases in datasets**, "what gets counted, counts". They highlight the underrepresentation and misrepresentation that portrays women and people of minoritized groups (such as LGBTQ+, racialized or disabled) as victims or subjects lacking agency. For instance, Amazon's blind CV screening tool was disposed in 2018, after discovering it automatically discriminated women. As a result of training the algorithm with data of the successful hires over the past decade, the algorithm learnt to dismiss CVs that contained the key word "woman" and all its proxies. Thus, AI was at risk of perpetuating the existent and unconscious biases.



Figure 1: Screenshot of the Independent news, 11/10/2018.

Lastly, we examined the **ethical** implications of AI use and the **regulatory framework** being forged in the EU under the leadership

of the Spanish presidency of the European Commission with the AI Act. Surprisingly, most of the collaborators were uninformed of these issues, including the debate surrounding "black boxes." Upon being informed, many expressed the necessity of establishing legislative measures. Notably, the sole collaborator knowledgeable in ethics and normative development reiterated multiple times she felt "unprotected".

### 4 CONCLUSIONS AND RECOMMENDATIONS

Succinctly answering the research inquiries, we can affirm that:

- No, it is currently not a dependable technology since it learns and automates biases.
- In Spain we use the AI embedded in ATS, ERP or LinkedIn Recruiter, and recruiters are starting to use chatbots like ChatGPT to deal with their workload as a personal tool.
- Most of the recruiters are unaware of due to the so-called automation bias.
- AI recruitment tools are not effective in their aim to potentiate diverse talent hiring [7]. Many researchers have proven that algorithms end up automatically excluding and discriminating women and people who are read as belonging to minoritized groups [1, 4, 6]. A regulatory framework, changes in the mindset of the designers and the people who build and curate datasets, are needed for AI to contribute to the DEI mission.

Given the analysis conducted on the contributions of the collaborators, we offer the following recommendations or best practices:

- DEI initiatives and policies should not be blindly outsourced to technology.
- Companies should resist the hype and analyze the actual necessity of AI and its impact.
- If finally decide to purchase, invest in AI and datasets with a gender perspective and produced within the framework of Design Justice[2].

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