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# Artificial Intelligence and Fundamental Rights: Technological and Legal Aspects of AI in Job Selection and Job Applications in Portugal

## Introduction

Technology is advancing at a rapid pace and it is certain that the world as we know it today will be transformed into something completely different.

As Maria Elisabete Ramos (2022, p. 229) points out, the 4th Industrial Revolution has unleashed a wave of disruption in the technology sector, bringing with it various innovations such as the Internet of Things, cobots, augmented, and virtual reality, big data, not to mention artificial intelligence.

It is true that artificial intelligence is one of the factors responsible for the rapid scientific and technological advances of recent decades, which are "completely transforming contemporary society, affecting the various areas of industrial and collective life" (Silva 2024, p. 53).

The concept of artificial intelligence first appeared in 1952 as a branch of computer science whose main premise is to simulate human intellectual capacity (Messa 2022, p. 72) and, under certain circumstances, to be so skilful as to surpass humans (Gonçalves 2021, p. 49).

In essence, artificial intelligence is based on a system made up of algorithms that can assimilate and replicate certain cognitive functions similar to human mental abilities, such as the ability to learn, reason, solve problems and make decisions autonomously (Silva 2024, pp. 53–54).

This is because technological equipment equipped with artificial intelligence is capable of learning from the inputs coming from the environment in which it is used, allowing it to carry out autonomous actions in order to achieve the objectives for which it has been designed (Silva 2024, p. 54).

While we recognise that AI is an asset to society, as machines equipped with this technology have a greater predictive ability than humans, as they can instantly process vast amounts of data to determine the ideal course of action, there are many dangers to fundamental rights in its massive use (Casey, Niblett 2017)[1]. In fact, it could be a threat that carries a number of risks, namely the violation of fundamental rights through potential algorithmic discrimination (Ramos 2022, pp. 232–233).

According to Anabela Susana de Sousa Gonçalves (2022, pp. 307–308), AI is a widely used tool in various sectors of activity, and many companies in the private sector even use algorithm-based systems for the recruitment and selection process.

Recognising the potential risk to the right to non-discrimination and the right to the protection of personal data, this research will analyse how artificial intelligence systems for recruitment and selection may affect the fundamental rights of prospective candidates.

[1] "Machines can process billions of data points instantly to determine an optimal course of action" (Casey, Niblett 2017, p. 1424).

## Problem definition

Technologies undoubtedly play an innovative and transformative role in the reality we live in, providing undeniable comfort and convenience to people in countless everyday activities. In some cases, technology has an extraordinarily revolutionary potential, to the point of changing certain realities.

For example, the evolution of technology has enabled the development of artificial intelligence (AI)-based software that can automate the recruitment and candidate selection process, speeding up the analysis of candidates' CVs (García 2019, p. 34).

AI provides the employer with an intelligent and agile system for recruiting and selecting candidates that is fast and autonomous, as these systems are based on a computer technology called 'algorithm'.

An algorithm is a mathematical instruction (code) with the ability to solve problems or perform certain functions autonomously, in which its *modus operandi* is based on assigning answers (outputs) to certain questions posed by input data, in order to achieve a goal for which it was previously programmed (Donati 2020, p. 416). These algorithms are often driven by a subset of AI called 'machine learning', which can identify patterns in input data, resulting in the creation of a model capable of making predictions and classifications (*What is machine learning?*).

This provides the employer with a method of selecting candidates by extracting data from applicants, where the system identifies patterns and behaviours, allowing it to optimise recommendations of candidates that best match the employer's pre-defined expectations and metrics (Teixeira 2023, p. 25).

Of course, these systems are very attractive from an employer's point of view, as they offer a less bureaucratic and less expensive process, which obviously makes it easier (Prieto 2021, p. 40) to eliminate less suitable candidates and select those best suited to the job.

From the candidate's point of view, Mariana Alves Teixeira (2023, pp. 25–26) believes that intelligent recruitment and selection systems can prevent deliberate discrimination by recruiters, as certain personal or intimate data cannot be taken into account by the software, but only professional skills.

However, as a result of the functions of the algorithm and the automation of data analysis, it is expected that these systems will end up defining the profiles[2] of the candidates analysed, "leading to the possibility of their selection on the basis of criteria that would be prohibited by the legal system in the context of traditional recruitment methods" (Teixeira 2023, p. 26).

In this sense, the potentially discriminatory effect of the algorithm is a serious problem, and the European Union Agency for Fundamental Rights (Agência dos Direitos Fundamentais da União Europeia 2021) has highlighted risks to fundamental rights in the areas of the right to non-discrimination[3] and the right to protection of personal data[4].

Faced with this problem, Ana Flávia Messa (2022, p. 73) points to the urgent need to create an international regulatory tool to limit the potential damage that AI could cause to fundamental rights.

In this context, the AI Act was published on 13 June 2024 to regulate the use of AI in the European Union, "ensuring […] a high level of protection […] of fundamental rights"[5].

Aware of the threats that AI recruitment and selection systems can pose to the legal sphere of candidates, the European legislator has classified them as 'high-risk AI systems'[6]. This AI Act therefore proposes "common rules applicable to all high-risk AI systems"[7], which we will analyse below.

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2 Article 4(4) of the General Data Protection Regulation (GDPR) defines 'profiling' as "any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular to analyse and predict aspects concerning that natural person's performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements".

3 See articles 13(2) and 26(1) of the Constitution of the Portuguese Republic (CRP).

4 See Article 35 of the CRP.

5 See Article 1(1) of the AI Act.

6 See Recital 52, Article 6(2) and Annex III, point 4, paragraph a), both of the AI Act.

7 See Recital 7 of the AI Act.

## Prohibition of discrimination

It is natural for recruitment and selection systems to create profiles of the candidates they analyse. In fact, as we've already seen, these types of computer systems identify patterns in the input data in order to differentiate between the different candidates for the job, and to discard those who don't meet expectations. We therefore recognise that this attitude on the part of the software produces a result that is essential to the functions it performs and, as such, cannot be considered discriminatory (Mann, Matzner 2019).

Of course, given that these systems are created and used by humans, they are always subject to discriminatory outcomes, whether due to negligence or deliberate malice, as well as the inherent prejudices of their digital creators.

As advocated by Norbert Tulak (2021, pp. 207–208), the developers of algorithms and/or AI systems must ensure that there is no possibility of decisions being taken that jeopardise the rights, freedoms and guarantees of the data subjects analysed, thus preventing these systems from processing discriminatory decisions.

As stated by Mariana Alves Teixeira (2023, p. 42) in order to identify a situation of discrimination, AI systems must use the so-called protected characteristics or prohibited grounds of discrimination as a distinguishing criterion. Basically, the 'protected characteristics' or 'prohibited grounds of discrimination' are those listed in Article 21(1) of the Charter of Fundamental Rights of the European Union (CFREU) and Article 14(2) of the European Convention on Human Rights (ECHR), which refer to sex, race, colour or ethnic or social origin, genetic characteristics, language, religion, political opinions, membership of a national minority, property, birth, disability, age or sexual orientation.

In the Portuguese context, the fundamental rights enshrined in the Constitution of the Portuguese Republic (CRP) are based on the principle of the dignity of the human being[8], which serves as a pillar of the entire legal system and even limits everyday legal relations, as a result of the principle of private autonomy (Article 405 of the Portuguese Civil Code).

[8] See Article 1 of the CRP.

It is therefore important to emphasise that, according to Article 18(1) of the CRP, private and public entities are closely bound to respect rights, freedoms and guarantees in their relations with each other. Therefore, the constitutionally protected fundamental rights of job applicants must be respected by recruiters and they must not be subjected to unjustified discrimination (Leal 2007, p. 11), which is why the CRP guarantees access for all citizens to the defence of their individual rights through access to justice and the courts by virtue of the principle of effective judicial protection (Article 20 of the CRP). In this way, ordinary citizens receive a guarantee of transparency and accountability from private organisations in relation to their fundamental rights (Leão 2023, pp. 31–32).

In view of the principle of non-discrimination enshrined in Articles 13(2) and 26(1) of the CRPD, candidates may not be discriminated against, disadvantaged, deprived of or excluded from access to employment on the basis of certain characteristics[9], so inappropriate differentiation or classification leads to automatic segregation by the AI system, which is unlawful and potentially illegal.

However, the legal protection of fundamental rights in particular, and human rights in general, provided by constitutions around the world, and even by anti-discrimination law, will not be sufficient, not least because the applicant will face a major challenge in proving that he or she has been discriminated against (in this respect, see: Gonçalves 2021, p. 54; Mann, Matzner 2019).

The Artificial Intelligence Act therefore imposes in 'Section 2' a number of requirements for the use of 'high-risk AI systems', which are broken down as follows: (i) implementation of a risk management system (Article 9) to ensure that there are systematic reviews and updates to identify potential risks throughout the life of the product and to manage known risks (Article 27); (ii) 'high risk AI systems' using techniques that involve training models with data must

[9] See Article 14(1)(a) of Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006; Article 3(1)(a) of Council Directive 2000/43/EC of 29 June 2000; and Article 3(1)(a) of Council Directive 2000/78/EC of 27 November 2000. Both articles prohibit discrimination in access to employment.

be developed on training, validation and testing datasets to meet certain criteria set out in this legislation (Article 10)[10]; (iii) technical documentation (Article 10) of the 'high risk AI system' must be required before it is placed on the market or put into service and must be kept up to date; (iv) the need for the 'high-risk AI system' to be technically capable of automatically recording events throughout its lifetime (Article 12) in order to track the operation of the system; (v) make the 'high-risk AI system' transparent (Article 13) to allow those responsible for using it to interpret and use the system's results appropriately; (vi) human supervision (Article 14) during the period of their use to prevent and minimise risks; and (vii) an obligation for 'high risk systems' to have an appropriate level of accuracy, robustness and cybersecurity (Article 15).

## The right to the protection of personal data

According to Mariana Alves Teixeira (2023, p. 79), the European Union's General Data Protection Regulation (GDPR) can protect the jobseeker in two ways: (i) by limiting the employer's access to personal data[11] that could be the basis for discriminatory decisions, namely through certain data processing principles; and ii) by giving the candidate control over their own data.

With regard to the first aspect, it is important to look at what is set out in Article 5 of the GDPR, as this is where the principles of data processing are reflected. Although this article lists a number of principles in an exhaustive manner[12], we will only focus on the

[10] See Article 10 of the AI Act.

[11] According to Article 4(1) of the GDPR, personal data means "any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person".

[12] Article 5 of the GDPR sets out the principles of lawfulness, fairness, transparency, purpose, proportionality, accuracy, conservation, integrity and confidentiality.

principle of legality in order to limit the length of our work and because it seems to us to be the one that brings the most objectivity to our research at the moment.

The principle of lawfulness is based on various legal grounds that legitimise the processing of personal data by the controller. To this end, the list contained in Article 6(1) of the GDPR must be taken into account: if the intention to process the data is found in one of the paragraphs, the processing is considered lawful, otherwise it is considered unfounded[13].

In the employment context, the processing of personal data by the employer will only be based on the circumstances referred to in Article 6(1)(a), (b) and (f) of the GDPR. Paragraph (a) refers to the free consent[14] given by the holder of the personal data to the entity that will process them for a specific purpose, in this case to apply for a specific job[15]. With regard to paragraph (b), the lawfulness of data processing is based on contractual or pre-contractual relations. It is clear that some data about the candidate will be necessary to assess their position in relation to the vacancy, but much of the personal data may not be relevant, which obviously means that its collection is unlawful (Encabo 2020, pp. 79–80). Finally, we have paragraph (f), which reflects the legitimacy of the processing of personal data from the perspective of the employer's interest, if the employer cannot justify the intention to process the data on the basis of the previous paragraphs (Teixeira 2023, p. 82).

It goes without saying that this processing of data by the employer should be limited to data that is strictly necessary for the exercise of the profession. The problem is that employers or recruitment and selection systems often do not limit themselves to analysing what is strictly necessary and, as a result, the processing may include data

[13] It should be noted that the CFREU requires a legitimate basis for processing data, see Article 8(2) of the same Act.

[14] See Article 4(11) of the GDPR.

[15] Recital 43 of the GDPR states that free consent is only given when there is no obvious imbalance between the data subject and the data controller. Of course, in this particular case, the candidate's free consent will, in the vast majority of cases, be based on the need to obtain a job, which means that the candidate is in a vulnerable position *vis-à-vis* the employer.

relating to private life and/or data considered sensitive[16], which is useless from the outset and often leads to discriminatory decisions (Leal 2007, pp. 16–17).

Given the sensitive nature of this data, the European legislator has enshrined in Article 9 of the GDPR the general principle prohibiting the processing of sensitive data. This means that the processing of data from job applications must be limited to what is strictly necessary, including the possibility of processing sensitive data.

In relation to the last issue, the GDPR provides some rights that candidates can use to avoid discriminatory behaviour, such as the right to transparency, accountability, rectification of data, erasure of data, not being subject to automated decisions and challenging them.

The right to transparency and accountability means that the data subject has the right to be satisfied[17] with the whole process of collection and processing of their personal data. As Filippo Donati (2020, p. 428) points out, thanks to these rights, the candidate will have access to the entire process that has been carried out up to the automatic decision of the recruitment and selection system. If a candidate is excluded from the selection process, they have the right to "obtain an objective and reasonable justification from the employer" (Teixeira 2023, p. 86)[18].

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[16] According to Article 9 of the GDPR, sensitive data are "personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person unequivocally, data concerning health or data concerning a natural person's sex life or sexual orientation". In essence, this definition conflicts with the concept of 'protected characteristics' or 'prohibited grounds of discrimination'.

[17] See articles 13 to 15 of the GDPR. Basically, it is based on the right to obtain from the controller of personal data all the information concerning the processing of your data and to have access to it. It is clear from Article 8(2) of the CFREU that this is considered a fundamental right of the data subject.

[18] It follows from Articles 13(2)(f), 14(2)(g) and 15(1)(h) of the GDPR that the data controller must provide information about "the existence of automated decision-making, including profiling, as referred to in Article 22(1) and (4), and, at least in such cases, useful information concerning the underlying logic as well as the significance and envisaged consequences of such processing for the data subject" (Teixeira 2023, p. 86).

In terms of the right to rectification and deletion of data (commonly referred to as the right to be forgotten), both are granted in Articles 16 and 17 of the GDPR, respectively. These rights allow the candidate to ask the employer to correct inaccurate data or to delete data previously provided for the application, in order to try to avoid a decision not to hire based on irrelevant data (Teixeira 2023, p. 87).

Finally, if the decision to exclude the candidate has been taken automatically, the candidate can benefit from the right not to be subject to automated decisions[19] and the right to challenge them. In this sense, these rights require that the exclusion decision generated by the system be supervised in advance by human beings "who take responsibility for informing the interested parties of the decisions, ensuring the necessary accountability and thus facilitating any possible challenge" (Teixeira 2023, p. 91).

## Conclusions

On the one hand, artificial intelligence systems for the recruitment and selection of candidates provide employers with a method that is capable of analysing a wide range of candidates. On the other hand, these systems are based on algorithms designed to identify patterns and behaviours that lead to the selection of the most suitable candidates and the elimination of those who do not fit the job, potentially violating the fundamental rights of the candidates themselves. However, taking into account the discriminatory potential of the algorithm and the fact that the employer has (illegitimately or unnecessarily) a set of candidates' personal data, this appears to be a major risk for the legal sphere of prospective candidates, which we believe will lead to possible discriminatory decisions in the near future.

In this sense, we can see the importance of the protection that the right to non-discrimination and the right to the protection of personal data can offer to discriminated candidates, both of which are legally protected by the Constitution of the Portuguese

[19] See Article 22 of the GDPR.

Republic, the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights.

However, while recognising the clear importance of these rights as an important tool in limiting discriminatory practices, we acknowledge that in the future they will not be sufficient to prevent the potentially rampant risks of fundamental rights being violated by algorithmic discrimination that we predict here.

Thus, in our view, the AI Act could offer new hope in the fight against discrimination caused by artificial intelligence, as it sets out various requirements for the development and use of high-risk artificial intelligence systems, and establishes a series of obligations to limit possible threats to fundamental rights, to which we draw attention here.

## Bibliography

**Legal acts**

Artificial Intelligence Act (AI ACT). Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Text with EEA relevance).

Charter of Fundamental Rights of the European Union (CFREU) (OJ C 364, 18.12.2000, pp. 1–22).

Constitution of the Portuguese Republic (CRP), 1976 (as amended).

Council Directive 2000/43/EC of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin (OJ L 180, 19.7.2000, pp. 22–26).

Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation (OJ L 303, 2.12.2000, pp. 16–22).

Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast) (OJ L 204, 26.7.2006, pp. 23–36).

European Convention on Human Rights (ECHR). European Treaty Series – No. 5.

General Data Protection Regulation (GDPR). Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (OJ L 119 4.5.2016, pp. 1–88).

Portuguese Civil Code, 1966 (as amended).

**Literature**

Agência dos Direitos Fundamentais da União Europeia (2021). *Preparar o futuro – Inteligência artificial e direitos fundamentais – Síntese*, https://fra.europa.eu/sites/default/files/fra_uploads/fra-2021-artificial-intelligence-summary_pt.pdf.

Casey A.J., Niblett A. (2017). The death of rules and standards. *Indiana Law Journal*, *92*(4), 1401–1447.

Donati F. (2020). Intelligenza artificiale e giustizia. *Rivista Associazione Italiana dei Costituzionalisti*, (1), 415–436.

Encabo S.O. (2020). La aplicación de inteligencia artificial a los procesos de selección de personal y ofertas de empleo: Impacto sobre el derecho a la no discriminación. *Documentación Laboral*, I(119), 79–98.

García F.X.G. (2019). La importancia del e-recruitment en la moderna gestión de recursos humanos. *International Journal of Information Systems and Software Engineering for Big Companies*, *6*(2), 33–39.

Gonçalves A.S. de S. (2022). Inteligência artificial e responsabilidade civil transnacional. In: E.S.M. da Silva, P.M. Freitas (Coord). *Inteligência artificial e robótica: Desafios para o direito do século*. Gestlegal, 307–327.

Gonçalves R.M. (2021). Inteligencia artificial y derechos humanos: Una solución a los conflictos éticos y morales a través de una regulación normativa futura. In: L.M. Martín, R.M. Gonçalves, M. Załucki, A. Partyk (Eds.). *Artificial intelligence and human rights*. Dykinson, 49–54.

Leal A.P.A. (2007). A esfera privada da trabalhadora no acesso ao emprego e na formação profissional. In: D.L. Campos (Org.). *Estudos sobre o direito das pessoas*. Almedina, 11–17.

Leão A.C. (2023). Algumas notas sobre direitos fundamentais, transformação digital e inteligência artificial. In: F.A.M. Magalhães, L.E. Moreira, T.M. Rocha (Org.). *Direito e inteligência artificial*, 10–36.

Mann M., Matzner T. (2019). Challenging algorithmic profiling: The limits of data protection and anti-discrimination in responding to emergent discrimination. *Big Data & Society*, *6*(2), https://doi.org/10.1177/2053951719895805.

Messa A.F. (2022). Reflexões éticas da inteligência artificial. In: E.S.M. da Silva, P.M. Freitas (Org.). *Inteligência artificial e robótica: Desafios para o direito do século*. Gestlegal, 65–82.

Prieto J.V. (2021). *Inteligencia artificial, derechos humanos y bienes jurídicos*. Editorial Aranzadi.

Ramos M.E. (2022). Corptech e desafios aos deveres de cuidados dos administradores. In: E.S.M. da Silva, P.M. Freitas (Org.). *Inteligência artificial e robótica: Desafios para o direito do século*. Gestlegal, 229–250.

Silva F.O. (2024). *Prova por reconhecimento e inteligência artificial. Novos horizontes*. Edições Almedina.

Teixeira M.A. (2023). *Da (des)proteção do candidato a emprego em face da inteligência artificial*. Edições Almedina.

Tulak N. (2021). Artificial intelligence and the development of deepfake technologies as modern threats to human rights. In: L.M. Martín, R.M. Gonçalves, M. Załucki, A. Partyk (Eds.). *Artificial intelligence and human rights*. Dykinson, 199–216.

*What is machine learning?* Microsoft, https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-machine-learning-platform [accessed: 12.12.2025].

## Abstract

### Artificial Intelligence and Fundamental Rights: Technological and Legal Aspects of AI in Job Selection and Job Applications in Portugal

In recent years, Artificial Intelligence has gained prominence in the business sector by allowing companies to focus on their core activities while automating routine and administrative tasks. However, the excessive autonomy and lack of transparency in certain AI systems can negatively impact the fundamental rights of individuals interacting with them. A notable example is the use of AI in recruitment processes, where algorithms screen candidates for job vacancies. Poorly managed implementation may increase the risk of discriminatory outcomes. This paper aims to evaluate the impact of AI on fundamental rights in private-sector recruitment and selection processes, examining how Portuguese and European legal frameworks can protect candidates. Although both Portuguese Constitutional Law and European Law uphold the principle of non-discrimination, they are currently insufficient to address algorithmic bias. In this context, the European legislator's adoption of the AI Act, designed to limit the potential discriminatory

effects of algorithms, is particularly commendable. In order to achieve the proposed objectives, the scientific methodology adopted in this scientific paper was a critical analysis of the state of the question, with an analytical review of the literature and doctrinal works of various authors that we have chosen for this research, and an analysis of the current Portuguese Law and European Union Law, including the current Artificial Intelligence Act, in order to draw the obvious conclusions.
**Key words**: Artificial Intelligence, fundamental rights, data protection, Artificial Intelligence Act, Job Application in Portugal