Artificial intelligence and employment law
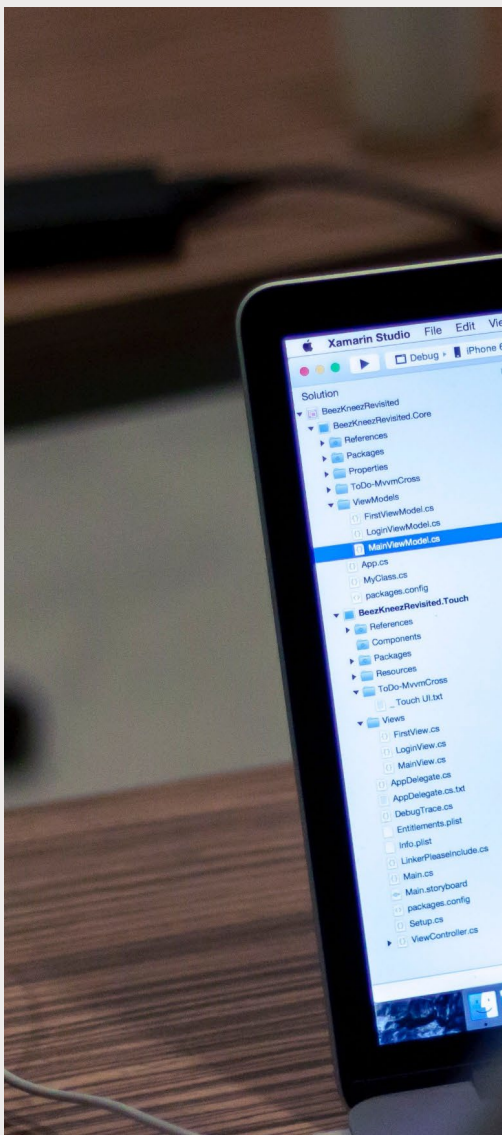
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Summary

Artificial Intelligence (AI) is a term which can encompass a wide variety of technologies, many of which are increasingly used in workplace management. The use of these technologies, while offering much potential, has also proved controversial and raised some important legal questions.

Algorithmic management refers to the use of AI or other algorithmic tools by employers to manage workers. Over recent years algorithmic management and the use of AI tools have become more widespread across many sectors of the UK. In particular, their use has been noted in three broad areas:

- In recruitment, to devise job adverts, source candidates and filter CVs. Some recruiters also use automatically scored tests as part of their recruitment process.

- In task allocation and performance management, including scheduling shifts and evaluating worker performance.

- In surveillance and monitoring of the workforce, tracking workers to monitor productivity or health and safety in the workplace.

Current employment law and AI

There are currently no explicit UK laws governing the use of AI and other algorithmic management tools at work. However, several current areas of law potentially restrict the use of these tools in practice.

Common law

Common law understanding of the relationship between employer and employee is one of personal service, requiring a degree of mutual trust and confidence between the two parties, including being able to explain decisions (*Keen vs Commerzbank AG* [2006]).

This may limit the degree to which employers can substitute AI decision-making for their own judgement before this is considered legally to undermine the basis of the employment contract.

Equalities law

The Equality Act 2010 prohibits discrimination by employers on the grounds of any protected characteristics, such as age, sex or race. It is widely accepted that AI tools can exhibit biases because of the ways in which they are trained;

this may make the use of some AI tools that make or influence workplace decisions unlawful, unless care is taken to minimise such biases.

Privacy law

Article 8 of the European Convention on Human Rights guarantees the right to privacy. Its incorporation into UK law via the Human Rights Act 1998 places some restrictions on the use of surveillance tools to monitor workers.

Data protection law

Data protection law places restrictions on data collection and processing. In particular, Article 22 of UK GDPR provides data subjects with the right:

> not to be subject to a decision based solely on automated processing, including profiling, which produces legal [or similarly significant] effects concerning him or her.

While potentially a significant restriction on the use of AI decision making by employers, in practice the Information Commissioner's Office has not yet issued any penalties to enforce this provision of UK GDPR. The Data Protection and Digital Information Bill (no. 2) currently going through Parliament would replace the current "general prohibition" on automated decision making with alternative "specific safeguards".

Policy development

The UK Government's March 2023 white paper 'A pro-innovation approach to AI regulation' laid out the framework for current plans to regulate of AI. This would take a non-statutory approach, relying on existing regulators to oversee the use of AI in their areas while following five broad principles: safety, transparency, fairness, accountability, and contestability.

The white paper has been criticised as a "laissez-faire" approach by the Labour Party, which has called for a more interventionist approach.

Other organisations have put forward alternative policy proposals. For example, the All-Party Parliamentary Group for the Future of Work advocates for an Accountability for Algorithms Act in their November 2021 report 'The New Frontier: Artificial Intelligence at Work'. The AI Law Consultancy's report 'Technology Managing People – the legal implications' (PDF), commissioned by the Trades Union Congress (TUC), proposes a range of alternative reforms to existing legislation along with new statutory guidance.

International policy

Overseas, the EU is in the process of introducing its AI Act, which is a much more interventionist and prescriptive approach to AI regulation.

1 Introduction to AI

1.1 What is AI?

There is no single, universally agreed definition of artificial intelligence (AI). It can broadly be thought of as technologies that enable computers to simulate elements of human intelligence, such as perception, learning, and reasoning. To achieve this, AI systems rely upon large data sets from which they can decipher patterns and correlations, thereby enabling the system to 'learn' how to predict future events. They do this by creating rules – algorithms – in response to the data, turning it into actionable information.

There are multiple subcategories of AI, such as machine learning and deep learning, as well as narrow AI and general ('strong') AI.[1]

Narrow versus general AI

Narrow AI is designed to perform a specific task (such as speech recognition), using information from specific data sets, and cannot adapt to perform another task. These are often tools that aim to assist, rather than replace, the work of humans and represent the technologies available today.

Artificial general intelligence (AGI – also referred to as 'strong' AI) is a hypothetical future kind of AI system that could undertake any intellectual task that a human can. AGI describes a system that can reason, analyse and achieve a level of understanding that is on a par with humans, something that has yet to be achieved by AI. The US computer scientist Nils John Nilsson proposed that one way to test if a system had achieved AGI was if it was able to enter the world of employment and successfully learn the skills to perform the different jobs "ordinarily performed by humans", from "knowledge work" (such as a 'Library assistant') to "manual labour" (such as a 'roofer').[2]

Machine learning and neural networks

Machine learning is one method used to train AI; it allows a system to learn and improve from examples without all its instructions being explicitly programmed.

Deep learning is a type of machine learning is inspired by the structure and function of the human brain and the way it transmits information – also

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[1]   Further information on the subcategories is set out at: Stanford University, Human-Centred Artificial Intelligence, Artificial Intelligence Definitions (PDF), September 2020.

[2]   Nils Nilsson, "Human-Level Artificial Intelligence? Be Serious!" (PDF), AI Magazine, 2005

known as a neural network. For further information see the Parliamentary Office of Science and Technology briefing on [Interpretable machine learning](#).

Large language models

Large language models (LLMs) are a type of AI which emerged around 2018, which use neural networks to generate text. They are pre-trained on large volumes of written texts such as books and articles. LLMs include chatbots such as ChatGPT and Google's Bard, as well as a range of back-end tools.

Although they are generally only trained to predict which words are likely to come next in a sequence, they can appear to exhibit significant subject knowledge in their outputs, as explained by David Nield in Wired Magazine:

> ChatGPT and Bard don't really "know" anything, but they are very good at figuring out which word follows another, which starts to look like real thought and creativity when it gets to an advanced enough stage.[3]

In this paper the term 'AI' is used in its widest sense to include both advanced machine learning tools as well as simpler algorithms used in parts of the management process. As well as the terms used to define AI, there are two key terms used to describe the ways in which it is used in modern workplaces.

Algorithmic management

Algorithmic management refers to the use of AI or other algorithmic tools by employers to manage workers. The term was first used by academics to describe the use of software by gig economy firms such as Uber and Lyft to assign work, monitor, evaluate and control the behaviour of their drivers.

Algorithmic management relies heavily on data collection about the workforce and is therefore closely related to workforce surveillance, as explained by US non-profit Data & Society in their explainer about the subject:

> Algorithmic management is a diverse set of technological tools and techniques to remotely manage workforces, relying on data collection and surveillance of workers to enable automated or semi-automated decision-making.[4]

Digital Taylorism

Digital Taylorism is a related term that has been used to describe management techniques incorporating technology to monitor and control the workforce, standardise tasks and maximise efficiency. It is named after classic Taylorism, the approach also known as scientific management devised by Fred W Taylor around the turn of the 20th century.[5]

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[3]   David Nield, "[How ChatGPT and Other LLMs Work and Where They Could Go Next](#)", Wired, April 2023

[4]   Alexandra Mateescu, Aiha Nguyen, "[Algorithmic Management in the Workplace](#)" (PDF), Data & Society, February 2019, p1

[5]   The Economist, "[Digital Taylorism](#)", 10 September 2015

2   Use of AI at work

AI can be deployed for various purposes within the world of work, including many which are outside the scope of this briefing. For example, complete automation of workers jobs and use of AI assistants to make jobs easier.

Instead, this briefing focuses on use of AI as a workplace tool in three broad areas: recruitment, line management, and monitoring & surveillance.

Some examples of AI use described below are from the UK, while others are from Europe, the US, and China. The latter examples are included because they illustrate potential uses of the technology in this country.

2.1   Recruitment

The process of hiring new employees for a job typically has several distinct stages. There are examples of AI playing a major role in each of these stages:

Sourcing

Using machine learning, AI can be used to identify skills, qualifications, and experience required for a particular job from a job description, which hiring managers can then use to reach out to suitable candidates.[6]

Other AI tools have been used to help draft job descriptions, for example to "analyse job descriptions and identify problematic words and phrases, suggesting alternative language to make the description more inclusive".[7]

Chatbots (AI tools that can respond to a user's chat messages) can also be used to guide candidates through the application and interview process and answer any questions they have about the job description.

Screening

After advertising the role, AI algorithms can sift through application forms and CVs by extracting relevant information and categorising it based on key criteria such as skills, education, and experience.[8]

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[6]   Victor Dey, "RecruitBot raises more funding to expand AI-driven recruitment platform", VentureBeat, 13 July 2023

[7]   Career Experts, "Reducing Bias in Hiring with AI-Powered Job Description Generation", 24 April 2023

[8]   Sejuti Das, "Top AI Tools For Resume Screening", Analytics India Magazine, 15 January 2021

For example, the company CVViZ deploys AI systems that identify keywords in CVs, and compares them against predefined job requirements, providing a ranking of candidates according to these pre-defined criteria.[9] This function is intended to reduce the time taken to reduce the size of the candidate pool.

In an interview for The Economist, Victoria MacLean, founder of the careers consultancy City CV, noted that these systems "reject up to 75% of CVs, or resumes, before a human sees them".[10] According to AI recruitment company Tengai, AI-powered CV parsing could theoretically lower the probability of human bias in the initial screening process by reducing human input.[11]

Assessments and psychometric tests

After making it through a CV sift, applicants may be required to take online assessments which assess their suitability for a role. For example, the UK's Civil Service uses scored online tests to assess an individual's analytical thinking, logical reasoning, and problem-solving capabilities, with "automatically-generated feedback" for candidates.[12] These tests often present candidates with real-life scenarios and challenges, allowing recruiters to gain insights into their ability to tackle complex problems.

Apart from problem solving and reasoning tests, third-party personality tests have also been adopted in the UK and elsewhere.[13] For example, Dutch company Pure Matching claim that their algorithm "maps your neuro-personality … to gain an overall picture of your biological identity".[14] These tests may help employers identify people with desired personality characteristics, such as emotional intelligence and leadership.

Interviewing

Finally, AI can be used to evaluate online interview performance by analysing biometric data. For example, US company HireVue developed an AI video-interviewing system which examined speech patterns, tone of voice, facial movements, and other biometric indicators to provide insight into a candidate's non-verbal communication.[15]

HireVue stopped using facial expression data to assess job candidates following a complaint to the US Federal Trade Commission about the appropriateness of this software for neurodivergent populations or people with facial palsy. However, similar products remain in use.[16] For example, the

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9   CVViz website (accessed 25 July 2023)

10   The Economist, "How an algorithm may decide your career", 21 June 2018

11   Tengai.com, "How AI recruiting solutions help reduce bias in your hiring process" (accessed 24 July 2023)

12   GOV.UK, "Preparing for the Civil Service Judgement Test" (updated 11 February 2022)

13   National Careers Service, "Psychometric tests: how to prepare" (accessed 24 July 2023)

14   Pure Matching website (accessed 25 July 2023)

15   HireVue website (accessed 25 July 2023)

16   BBC, "Job hunting for neurodivergent people: 'AI recruitment means I've got zero chance'", 22 March 2022; epic.org, "In re HireVue" (accessed 27 June 2023)

US firm MyInterview focuses on tone of voice to rank candidates during job interviews, despite concerns about the accuracy of this measure.[17]

2.2 Line management

Shift scheduling

Automatic shift allocation algorithms are becoming increasingly prevalent in the retail and hospitality sectors.[18] These algorithms work by forecasting customer footfall, using information as diverse as traffic history, point-of-sale data, and weather forecasts.

Footfall predictions are then used to generate 'dynamic' schedules for workers which respond to consumer demand. Schedules can be quickly reorganised to adapt to changing circumstances (such as unexpected absences or shifts in demand) and minimise disruption. Platforms such as Rotageek and Percolata are used by companies including Pret A Manger, O2, and UNIQLO.[19]

AI might help employees schedule the shifts they want by providing user-friendly interfaces and intelligent recommendations. Employees can input preferred shifts, availability, and time-off requests, and the AI system then suggests suitable options. However, 'just-in-time' staffing algorithms often allocate workers irregular hours and might assign shifts at very short notice.

Workers might also be pressured to work 'micro-shifts' split into smaller chunks. Therefore, although this form of scheduling is efficient for employers, some have argued that the risks inherent in fluctuating customer demand – formerly borne by the company – are off-loaded onto employees.[20]

Performance evaluation

AI algorithms can be used to quantify worker productivity and performance, which may in turn affect decisions about promotion, rotation, and firing.[21] AI's role in such formal appraisal processes could have some advantages for both employers and employees because they allow real-time evaluation, avoiding the delay of annual appraisals, while also potentially mitigating human biases sometimes displayed by managers.

A 2018 LinkedIn article expanded upon these potential benefits, stating:

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[17] Sheridan Wall, Hilke Schellman, "We tested AI interview tools. Here's what we found" MIT Technology Review, 7 July 2021

[18] Global Market Estimates website, "AI Scheduling System Market" (accessed 27 June 2023)

[19] Percolata website (accessed 25 July 2023); Calculus Capital, "Rotageek" (accessed 27 June 2023)

[20] Karen Levy, "Why AI surveillance at work leads to perverse outcomes", Psyche, 25 January 2023

[21] Oorwin, "Use of AI in Performance Reviews", 17 March 2023

> Not only can AI correct for racial and gender bias, but it also is not susceptible to performance-review-specific biases, such as recency bias (where actions performed recently are given more weight than actions that occurred say, 11 months ago for a yearly assessment).
>
> Similarly, AI can control for contrast bias, which occurs when a manager compares an employee's performance to their peers rather than to objective measures of success.[22]

Nonetheless, the role of AI in worker performance reviews has been criticised for lacking a "human element", and potentially failing to consider employees' "human potential" not evident in the data.[23] The potential for AI systems to also exhibit biases of their own is also discussed below (see section 3.3).

Manufacturing safety

AI could directly improve workplace safety. A July 2022 Organisation for Economic Co-operation and Development (OECD) report highlighted a 2021 briefing by the European Agency for Safety and Health at Work (EU-OSHA), which suggested that the use of robots with embedded AI can "[remove] workers from hazardous situations".[24]

Computer vision algorithms could analyse real-time video feeds from cameras placed strategically throughout the workspace. By monitoring for potential hazards such as moving machinery or unsafe worker behaviour, AI could alert supervisors or workers to take preventive action.

2.3 Monitoring and surveillance

Perhaps the most high-profile use of AI in the workplace is the monitoring and surveillance of workers. As summarised in the OECD's July 2022 report:

> The deployment of predictive models and the processing of unstructured data (text, audio and video), together with the use of network records, phone apps, sensors, biometric tracking devices (such as wearable fitness trackers) and facial recognition systems, has enabled the development of multi-source datasets and induced a transformation in the nature of worker monitoring.[25]

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[22] Sascha Eder, "Should you use AI for performance review?", LinkedIn, 31 July 2023

[23] Oorwin, "Use of AI in Performance Reviews", 17 March 2023

[24] Angelica Salvi del Pero, Peter Wyckoff, Ann Vourc'h, "Using Artificial Intelligence in the workplace: What are the main ethical risks?", OECD Social, Employment and Migration Working Paper No. 273, 5 July 2022; European Agency for Safety and Health at Work, "IMPACT OF ARTIFICIAL INTELLIGENCE ON OCCUPATIONAL SAFETY AND HEALTH", 7 January 2021, p1

[25] Angelica Salvi del Pero, Peter Wyckoff, Ann Vourc'h, "Using Artificial Intelligence in the workplace: What are the main ethical risks?", OECD Social, Employment and Migration Working Paper No. 273, 5 July 2022, p25

On one hand, employers and tech producers may argue that monitoring employees can improve both productivity and workplace safety.[26] For example, AI-based monitoring systems for delivery drivers can enhance safety by tracking metrics like vehicle speed, seatbelt usage, and the driver's physical state to alert drivers to immediate safety concerns.

On the other hand, workplace AI surveillance raises concerns about privacy and mental health. For example, some technologies can capture employees' unsent emails, webcam footage, microphone input, and keystrokes, while more advanced monitoring systems even allow live streams of employees in a shared digital environment.[27]

Some evidence suggests that this level of surveillance may reduce trust between employers and employees, fostering a culture of micromanagement and eroding job satisfaction.[28] Moreover, the feeling of being constantly watched and scrutinised can contribute to increased stress, anxiety, and reduced mental well-being.[29] Excessive monitoring may dehumanise workers by treating them as commodities rather than valued human beings.[30]

Various examples of workplace monitoring have made the news in recent years. These can be split into two broad overlapping categories: productivity monitoring and biometric monitoring.

Productivity monitoring

Postal workers

The April 2023 Business, Energy and Industrial Strategy (BEIS) Select Committee report 'Post-pandemic economic growth: UK labour markets' noted that Royal Mail was using AI assistants to track workers' productivity. The Committee expressed concerns that data collected was being used "to not only discipline individual workers, but to create anxiety in the workplace by comparing postal workers speeds on workplace notice boards".[31]

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[26] Smart eye website, "Driver Monitoring System" (accessed 24 July 2023); Shell website, "In-vehicle monitoring systems improve driving skills" (accessed 24 July 2023)

[27] Julia Gray, "The bossware boom is upon us: a look inside the employee monitoring software market", The Business of Business, 10 February 2021; Zoe Corbyn, "'Bossware is coming for almost every worker': the software you might not realize is watching you", The Guardian, 27 April 2022

[28] Peter Holland, Brian Cooper, Rob Hecker, "Electronic monitoring and surveillance in the workplace: The effects on trust in management, and the moderating role of occupational type", Personnel Review, Vol 44, 2015

[29] Rudolf Siegel, Cornelius Konig, Veronika Lazar, "The impact of electronic monitoring on employees' job satisfaction, stress, performance, and counterproductive work behavior: A meta-analysis", Computers in Human Behavior Reports, Vol 8, December 2022

[30] Drew Harwell, "Contract lawyers face a growing invasion of surveillance programs that monitor their work", The Washington Post, 11 November 2021

[31] BEIS Committee, "Post-pandemic economic growth: UK labour markets", 21 April 2023, HC 306 2022-2023, para 62

Amazon employees

The BEIS Committee also took evidence from Amazon. The Committee were concerned about the use of productivity data in staff decisions. One witness acknowledged that an Amazon employee can be fired if they have three productivity flags on the AI monitoring system, though Amazon subsequently clarified that the final decision remains with a human manager.[32]

Biometric monitoring

Biometric data (biological or behavioural data about individuals) can be used by AI systems in many ways. For example, in the UK, the Uber Eats delivery company uses facial recognition technology to verify the identity of workers at the start of shifts. Such technology, however, has raised concerns that these systems perform worse for people from minority ethnic groups because they are underrepresented in the datasets the algorithms are trained on.[33]

In addition to facial identity, AI systems are also being developed to detect emotions from facial expressions. For instance, Humanyze have developed wearable AI systems that monitor employee interactions and analyse their body language in real-time.[34] These systems claim to provide insights into communication patterns, collaboration skills, and employee well-being. However, doubts have been raised about the scientific basis of this.[35]

Finally, some advanced AI systems can even track brain activity, although there is no evidence of such technology being commercially used in the UK at present. For example, Emotiv, a neurotech company, has introduced brain-computer interfaces (BCI) that monitor brain activity associated with attention, cognitive workload, and stress levels.[36] Such tech is supposed to allow employers to identify optimal work conditions and provide targeted interventions for stress management.

In China, train drivers on the Beijing-Shanghai rail line reportedly wear brain monitoring devices as a safety measure. The manufacturer claims these devices "measure different types of brain activities, including fatigue and attention loss, with an accuracy of more than 90%. If the driver falls asleep, the cap triggers an alarm".[37]

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[32] As above, para 60

[33] Alex Najibi, "Racial Discrimination in Face Recognition Technology", Harvard University Science Policy Blog, 24 October 2020; Andrew Kersley, "Couriers say Uber's 'racist' facial identification tech got them fired", Wired, 1 March 2021; Joy Buolamwini, Timnit Gebru, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification", Proceedings of Machine Learning Research, Vol 81, 2018

[34] Humanyze website (accessed 25 July 2023)

[35] Alan Fridlund, "The behavioral ecology view of facial displays, 25 years later", In Jose-Miguel Fernández-Dols and James Russell (Eds.), The science of facial expression, 2017 [online]; Kate Crawford, "Artificial Intelligence Is Misreading Human Emotion", The Atlantic, 27 April 2021

[36] Emotiv website (accessed 25 July 2023)

[37] Stephen Chen, "'Forget the Facebook leak': China is mining data directly from workers' brains on an industrial scale", South China Morning Post, 29 April 2018

2.4   Prevalence of AI usage

The prevalence of AI usage for these kinds of management functions is difficult to gauge. However, evidence suggests that the use of AI systems in the workplace is significant and increasing, although exact figures vary.

According to the Department for Digital, Culture, Media and Sport (DCMS), 68% of large companies in the UK and 15% of all UK businesses had adopted at least one form of AI by January 2022.[38] Ten per cent reported plans to adopt AI in the future.

The ONS' Business Insights and Conditions Survey in April 2023 found that 16% of UK businesses were currently using some form of AI technology; for the most part this was in the form of email spam filters (10.5% of business) with other forms of AI being less common, as shown in the chart below:

UK Businesses using AI applications (April 2023)

Application	Percentage
Spam filters	10.5%
Chatbots	3.9%
Facial recognition	2.7%
Voice assistants	1.2%
Personalised shopping	1.1%
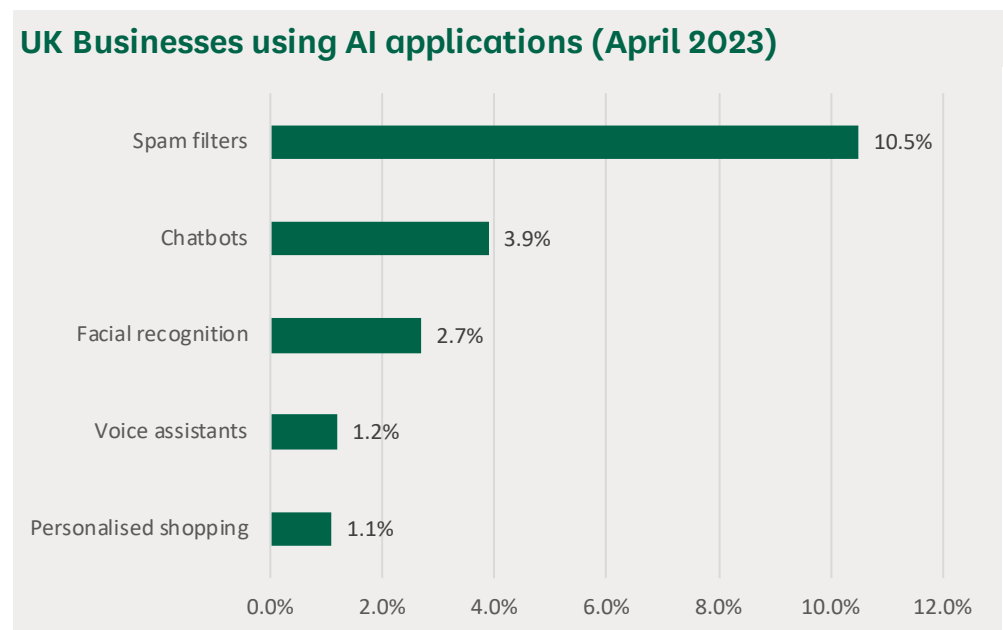
Source: ONS Business Insights and Impact on the UK Economy Wave 80 April 2023

AI usage was more prevalent in larger companies, and most prevalent for businesses in the ICT and professional, scientific and technical industries.

A further 13% of businesses were planning to adopt it in the future.[39] Creating efficiencies to reduce costs or increase productivity was cited as the reason for using AI by 35% of businesses using or intending to use AI. The same proportion saying improving cyber security.

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38   GOV.UK, AI activity in UK businesses, 12 January 2022

39   ons.gov.uk, Understanding AI uptake and sentiment among people and businesses in the UK: June 2023, 16 June 2023

Similarly, a May 2023 YouGov survey suggests somewhat higher use of AI in the sales, service, marketing, and commerce industry. 38% of UK respondents were using or planning to use generative AI (AI tools such as large language models, that can write text or generate images) in these industries.[40]

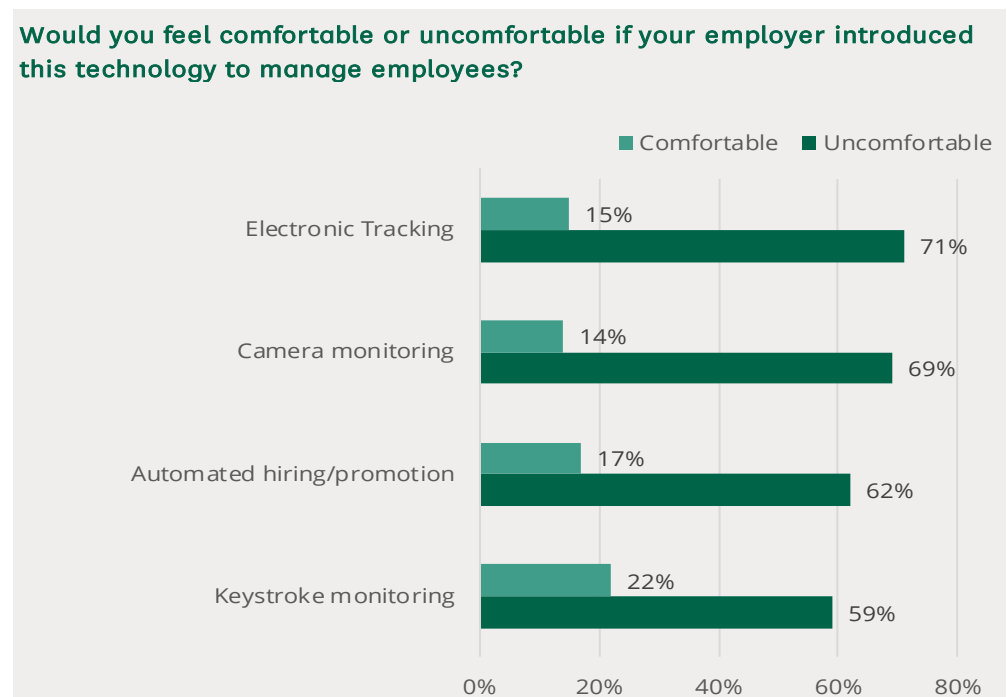## 2.5 Attitudes towards AI usage

According to McKinsey's 2021 State of AI survey, 44% of respondents in advanced economies were concerned about AI explainability (the ability to explain how AI models come to their decisions), 41% were concerned about privacy, and 30% were concerned about equity and fairness.[41]

A June 2023 Opinium survey of over 1000 British workers (commissioned by the Prospect trade union) found the majority of employees were uncomfortable with technology which might be used by employers to manage them, as shown in the chart below.

Would you feel comfortable or uncomfortable if your employer introduced this technology to manage employees?

■ Comfortable ■ Uncomfortable

Technology	Comfortable	Uncomfortable
Electronic Tracking	15%	71%
Camera monitoring	14%	69%
Automated hiring/promotion	17%	62%
Keystroke monitoring	22%	59%

Source: Prospect / Opinium Survey

Electronic tracking – wearable devices to monitor where employees are.
Camera monitoring – recording when employees are sat at their home computer.
Automated hiring/promotion – software that determines who gets hired or promoted.
Keystroke monitoring – tracking how often and quickly employees are using their keyboard.[42]

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[40] Salesforce website, As UK Workers Embrace Generative AI, 62% Say They Lack Trusted Data and Security Skills, 29 June 2023

[41] McKinsey website, The state of AI in 2021, 8 December 2021

[42] Prospect website, Public call for government regulation of generative AI at work, 1 June 2023

3   Current employment law and AI

3.1   Overview

There are currently no specific laws that explicitly regulate the use of AI in a workplace context. However, there are a number of areas of both statute and common law that potentially restrict the use of some types of workplace AI in practice.

In this section, four such areas of potentially relevant law are discussed: common law, equality law, privacy law, and data protection law. This is not necessarily a definitive list and the application of some of these areas of law to AI remains to be tested in the legal system.

Devolved considerations

Employment law is a devolved matter in Northern Ireland so different pieces of statute law apply from those listed below in 3.2, but the considerations are broadly similar to those set out here.

In Scotland, employment law is not devolved so the same statutory considerations apply as in England and Wales. However, Scots law differs somewhat from the common law of England and Wales, though the same general principles of mutual trust and confidence apply to those discussed below in 3.1.[43]

3.2   Common law

The common law relationship between employer and employee involves a mutual contract in which the employee's promise to work is mutually dependent on the employer's promise to pay the employee.[44] This mutuality of obligation, however, may be threatened by the increasing use of AI to make or inform employers' decisions, making it harder for employers to explain that their decisions have been taken in good faith.

Relatedly, the principle of personal service refers to the employee's obligation to provide personal effort, skill, and expertise in their role.[45] Without this

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43   David Cabrelli 2014, "The Mutuality of Obligations Doctrine and Termination of the Employment Contract: McNeill v Aberdeen City Council (No 2)", Edinburgh Law Review, vol 18 no 2, 2014, p259–65

44   RealBusiness, "Understanding Mutuality Of Obligation In Business Law" (accessed 26 July 2023)

45   Lewis Silkin, "Employment status", 17 October 2022

obligation, the relationship is not one of an employer and employee, but instead becomes another commercial relationship.

Trust and confidence

The personal service obligation implies a term of mutual trust and confidence between employer and employee, which is necessary for any employment contract to be effective. As described by Lord Steyn in *Malik and Mahmud v Bank of Credit and Commerce International S.A* [1997]:

> It is expressed to impose an obligation that the employer shall not:
>
> ". . . without reasonable and proper cause, conduct itself in a manner calculated and likely to destroy or seriously damage the relationship of confidence and trust between employer and employee." [46]

The absence of trust and confidence is so fundamental to the employment contract that a breakdown of trust and confidence by either party is taken to be a fatal breach of the employment contract. [47]

A [March 2021 report for the Trades Union Congress (TUC)](#) by Robin Allen KC and Dee Masters of the AI Law Consultancy entitled 'Technology Managing People: The Legal Implications' argues that these common law principles have two important considerations for the use of AI in management: that employers are obliged to be able to explain their decisions and to justify that their decisions are made in good faith:

> 1.42. First, as Lord Justice Mummery went on to say in [*Keen v Commerzbank AG*], it means that employers are very often under an obligation to provide explanations to employees for certain decisions where the employer exercises discretions under the contract of employment […]
>
> 1.43. Second, the common law recognises that there is a power imbalance inherent in the relationship which has implications. Chief among these is that an employer is required to take decisions about employees in way that is lawful, rational and in good faith. [48]

The report refers to the case of *Keen v Commerzbank AG* [2006], which considered whether an employer's decisions around an employee's bonuses were "irrational or perverse". A key conclusion from *Keen* is that employers need to be able to provide explanations for important decisions affecting their employees to comply with their common law obligations. [49]

This may be difficult in cases where important decisions, such as around dismissal, pay or promotion, are either made by or with heavy reliance on AI

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[46] *Malik and Mahmud v. Bank of Credit and Commerce International S.A.* [1997] UKHL 23; [1998] AC 20; [1997] 3 All ER 1; [1997] IRLR 462; [1997] 3 WLR 95; [1997] ICR 606

[47] Contracts of Employment, IDS Employment Law Handbook, August 2019, Para 3.92

[48] Robin Allen KC, Dee Masters, "Technology Managing People – the legal implications" (PDF), AI Law Consultancy, 11 February 2021, p30

[49] *Keen vs Commerzbank AG* [2006] EWCA Civ 1536 [43]

systems, particularly in such cases where the AI acts as a 'black box' and the human manager has little understanding of how it reached its outputs.

3.3   Equality and fairness laws

The Equality Act 2010

The Equality Act 2010 sets out legal duties for employers to avoid discrimination against employees or prospective employees in all parts of the employment relationship, on the basis of any of the protected characteristics set out in section 4 of the Act such as age, race or sex.[50]

These legal considerations apply regardless of whether the employer's decisions were made by human managers or made by or with the assistance of AI systems. The complicated development and implementation path of AI tools, however, can make it harder to establish accountability for discriminatory decisions.

In legal terms, the use of an AI system could be seen as a "provision, criterion or practice" which could give rise to claims of indirect discrimination if it had disproportionate effects on one or more protected groups.[51]

The Equality Act implements the UK's commitment to Article 14 of the European Convention on Human Rights (ECHR), which establishes the right to non-discrimination by prohibiting unfair treatment based on protected characteristics. Please refer to the Library's briefing A short introduction to equality law for more information.[52]

Bias in AI

Bias against protected characteristics can occur in AI systems, often because they learn from real-world data that includes examples of human biases, as explained by the Information Commissioner's Office in their guidance on AI:

The fact that AI systems learn from data does not guarantee that their outputs will not lead to discriminatory effects. The data used to train and test AI systems, as well as the way they are designed, and used, might lead to AI systems which treat certain groups less favourably without objective justification.[53]In one widely reported example, in 2014 Amazon set up a team in Scotland to develop its own automated CV screening algorithm using a decade's worth of internal recruitment data. The algorithm aimed to identify the traits and qualifications highly valued by the company in potential candidates. However, the following year it reportedly emerged that the algorithm had inadvertently inherited biases from past hiring practices, which

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[50]   Equality Act 2010, s 4

[51]   Equality Act 2010, s 19(1)

[52]   Commons Library research briefing CBP-9448, A short introduction to equality law, 3 February 2022

[53]   ICO, "What about fairness, bias and discrimination?" [accessed 26 July 2023]

had led to an imbalance between male and female candidates.[54] According to Reuters:

> In effect, Amazon's system taught itself that male candidates were preferable. It penalized résumés that included the word 'women's', as in 'women's chess club captain'.[55]

The project was ultimately abandoned, with Amazon saying that the tool "was never used by Amazon recruiters to evaluate candidates" although according to Reuters, Amazon "did not dispute that recruiters looked at the recommendations generated by the recruiting engine."[56]

Comparing algorithmic bias with human bias

Similar risks of algorithmic bias were identified in a review for the Government by the Centre for Data Ethics and Innovation in 2020, though this review also noted that simply because AI can exhibit bias does not necessarily mean it is more biased than humans. [57]

The review concluded that "there are reasons to think that better use of data can have a role in making decisions fairer, if done with appropriate care." The review also noted that "The issue is not simply whether an algorithm is biased, but whether the overall decision-making processes are biased," something that includes looking at how human managers are using AI to inform their own decision making.

Justification of indirect discrimination in the Equality Act 2010

Employers can legally justify indirect discrimination arising from AI or other algorithms by demonstrating that their use of the technology is a proportionate means of achieving a legitimate aim – something known as 'objective justification'.[58] Relevant considerations include whether less biased alternatives were available, which might mean considering whether the degree of bias exhibited by the AI was more or less than human decision makers would show.

The AI Law Consultancy concluded that the Equality Act 2010 can meet discrimination issues arising from AI in the workplace, despite having been crafted years before most current AI technology was developed.[59] Nonetheless, the authors cautioned that the Act can only be used effectively

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54   BBC News, "Amazon scrapped 'sexist AI' tool", 10 October 2018; Business Insider, "Amazon built an AI tool to hire people but had to shut it down because it was discriminating against women", 10 October 2018

55   Jeffrey Dastin, "Amazon scraps secret AI recruiting tool that showed bias against women", Reuters, 11 October 2018

56   As above

57   Centre for Data Ethics and Innovation, "Review into bias in algorithmic decision-making", 27 November 2020

58   Citizens Advice, "Justifying discrimination", [accessed 27 July 2023]

59   Robin Allen KC, Dee Masters, "Technology Managing People – the legal implications" (PDF), AI Law Consultancy, 11 February 2021, para 2.18

when AI companies are transparent in allowing their algorithms to be evaluated.

One concern they raised was that the complexity of the development chain of AI systems, from the initial coders all the way through to the final client users, can make it hard to establish legal accountability:

> There are difficulties with identifying when and how and by whom discrimination is introduced within the "value chain" of actors who have created an AI tool, which in turn can make it difficult for workers and employees to enforce rights to non-discrimination.[60]

The Employment Rights Act 1996

The Employment Rights Act 1996 (ERA) contains provisions to protect employees with at least two years continuous service from unfair dismissal.[61]

Section 98 of the ERA sets out the general conditions for a dismissal to be fair. The employer must show both that the dismissal was for potentially fair reasons (such as capability or conduct) and that, given all the circumstances, the dismissal decision falls within the range of reasonable responses open to a reasonable employer.

AI involvement in dismissal decisions

While the ERA makes no explicit mention of AI-informed decisions, the same legal test of fairness exists whether or not the employer relied upon AI systems in reaching the decision to dismiss. It is therefore possible for some unfair dismissal decisions, which are unfair because of flaws in the AI processes used, to be covered by existing protections against unfair dismissal.

The AI Law Consultancy give an example of an employee who is dismissed for breaching the absence management procedure after an AI system incorrectly processed a GP's fit note and miscategorised an authorised absence as unauthorised. The report concludes that in this case:

> "The dismissal would likely be unfair because, at the very least, the conclusion that the employee had a final period of unauthorised absence is factually incorrect due to a flawed AI system and it would therefore be unreasonable to rely on that assessment."[62]

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[60]   Robin Allen KC, Dee Masters, "Technology Managing People – the legal implications" (PDF), AI Law Consultancy, 11 February 2021, p50

[61]   Employment Rights Act 1996, legislation.gov.uk

[62]   Robin Allen KC, Dee Masters, "Technology Managing People – the legal implications" (PDF), AI Law Consultancy, 11 February 2021, p76

Explainability of AI decisions

Nonetheless, many AI-based decisions are difficult to comprehend because the workings of many so-called "black-box" algorithms are often very difficult to explain.[63]

This explainability problem is exacerbated by concerns about intellectual property rights, which discourage stakeholders from disclosing commercially sensitive information to other entities in the AI development chain.[64] This could therefore pose challenges for future employment law cases where being able to give explanations or justifications for why certain decisions were made are often key in meeting the requisite legal tests. See the related discussion of the Uber drivers case under section 3.4 below where this proved to be a key consideration.

3.4 Privacy law

The use of AI in the workplace has considerable implications for privacy law, particularly with regards to monitoring and surveillance algorithms. The TUC's 2020 report 'Technology managing people - The worker experience' highlighted concerns about the intrusive nature of these systems, finding that 27% of workers surveyed had had their communications screened, 13% had experienced desktop monitoring, and 8% were aware of social media screening.[65]

Privacy in the European Convention on Human Rights

Article 8 of the ECHR guarantees employees and workers the right to privacy; it is incorporated into UK law via the Human Rights Act 1998 (HRA).[66] It has been established by the European Court of Human Rights in *Barbulescu v Romania* that in some cases this right to privacy can in principle extend to protections against workplace monitoring by an employer.[67]

Because the ECHR is a dynamic document, referred to as a "living instrument", its provisions are interpreted in a manner that considers both evolving human rights standards and advancements in technology and science. Employers therefore have a duty to ensure that AI technologies do not unduly infringe upon employees' privacy rights.

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[63] Brighterion, "Explainable AI: from black box to transparency", 16 March 2022

[64] Gil Appel, Juliana Neelbauer, David Schweidel, "Generative AI Has an Intellectual Property Problem", Harvard Business Review, 7 April 2023

[65] Trades Union Congress, "Technology managing people - The worker experience", 29 November 2020, p27

[66] Human Rights Act 1998, legislation.gov.uk

[67] *Bărbulescu v. Romania* [2017] ECHR; Joe Atkinson, "Workplace Monitoring and the Right to Private Life at Work", Modern Law Review Vol 81 Issue 4, pp 688-700, 4 July 2018

Compliance of AI surveillance with ECHR privacy rights

In some cases, video surveillance or the accessing of personal data by an employer could constitute an interference with employees' privacy rights under Article 8 of the ECHR.[68] In such cases where Article 8 is engaged, AI-based monitoring would only be permitted if it meets three different criteria:

1. The interference must be compatible with the UK's General Data Protection Regulation (GDPR) and Data Protection Act (DPA) – both discussed below under section 3.5.

2. The interference must pursue a legitimate aim – for instance ensuring the smooth running of the company. This can be done by checking whether employees are performing their professional duties adequately, and hence this criterion is likely to be met.

3. The interference must be necessary in a democratic society – it must correspond with a pressing social need and be proportionate to the legitimate aim pursued. A large number of diverse considerations determine whether the interference is necessary, which means that any decision will likely be highly context specific.[69]

At present, the AI Law Consultancy argues that more guidance is needed in this area:

> There is inadequate legally binding guidance to employers explaining when Article 8 rights are infringed by the use of AI-powered technology and how, practically speaking, the Article 8 balancing exercise is to be resolved.[70]

Consequently, the AI Law Consultancy suggests that employees will not be able to "hold the line against inappropriate incursions into their right to a private life" without legal clarifications and updates to Article 8 and the HRA.[71]

3.5 Data protection law

Part 2 of the Data Protection Act 2018 (DPA) and the UK General Data Protection Regulation (UK GDPR) govern the general processing of personal data (data on an identified or identifiable person) in the UK. The UK GDPR is

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[68] *Antovic and Mirkovic v Monetenegro* [2017] ECHR; *Amann v Switzerland* [2000] ECHR

[69] European Court of Human Rights, "Guide on Article 8 of the European Convention on Human Rights" (PDF), 31 August 2022, p11–14

[70] Robin Allen KC, Dee Masters, "Technology Managing People – the legal implications" (PDF), AI Law Consultancy, 11 February 2021, p69

[71] As above, p69

the retained version of the [EU General Data Protection Regulation](#) (PDF) which came into force on 25 May 2018.[72]

Together, UK GDPR and the DPA provide the right to be protected in relation to data processing. They follow the broad principle that data should be accurate and processed in a way that is fair and transparent.[73]

These rules place restrictions on the ways in which AI tools could collect and process data about workers, as well as granting workers a right in principle not to be subject to significant decisions made solely by automated systems (though in practice this restriction appears to have had a limited effect in the UK as explained below).

Data processing and exceptions

Under UK GDPR Article 4, "personal data" about workers, such as their movements, facial features, key presses, hours worked or social media use, is subject to rules around collection and use.

Employees have rights relating to how their personal data is processed, which the employer must comply with.[74] One such obligation is to produce Data Protection Impact Assessments (DPIAs) under UK GDPR Article 35, which help the data controller systematically analyse, identify, and minimise the data protection risks of a project.

Article 21 of UK GDPR provides data subjects with the right to object to processing of personal data. Workers can request that their data is no longer processed for specific purposes, such as direct marketing or certain types of research.

Furthermore, as set out in Article 6, processing of employees' personal data is explicitly unlawful unless at least one of three criteria are met:

- The employees consented to the data processing (Article 6(1)(a))

- The data processing is necessary for the performance of the employment contract (Article 6(1)(b))

- The data processing is necessary for the purposes of a legitimate interest, provided this is not overridden by the fundamental rights of the employee (Article 6(1)(f))

The Information Commissioner's Office (ICO), the regulator responsible for enforcing data protection law in the UK, has noted that because of the power

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[72] [Regulation 2016/679 EU](#) (accessed 13 March 2023); The EU GDPR was incorporated into UK law at the end of the EU Transition Period under [section 3 of the European Union (Withdrawal) Act 2018](#) and modified by the [Data Protection, Privacy and Electronic Communication (Amendments etc) (EU Exit) Regulations 2019](#) under the power in [section 8 EUWA 2018](#) to create the UK GDPR.

[73] [UK GDPR, Article 5](#)

[74] UK GDPR applies more generally to any "data subjects" and "data controllers", not just employees and employers.

imbalance between workers and employers inherent in any employment relationship, "true consent" from employees may be difficult to obtain.[75] However, the other two criteria offer alternative ways for many employers to legally justify their data processing.

The right not to be subject to automated decision making

Awareness of automated decision making

Articles 13(2)(f), 14(2)(g) and 15(1)(h) of UK GDPR require data controllers to provide data subjects with acknowledgement of "the existence of automated decision-making, including profiling". Furthermore, they must provide data subjects with "meaningful information about the logic involved, as well as the envisaged consequences of such processing for the data subject". However, this is the case only when the data processing falls under the umbrella of Article 22 (explained below).

Decisions based solely on automated data processing

Perhaps the most significant GDPR article for AI regulation, Article 22 provides data subjects with the right:

> not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.

On the face of it, this article seems to rule out algorithmic management and require a "human in the loop" of many significant decisions made by employers, for example around recruitment, that could fall within the umbrella of "similarly significant" to legal effects. However, certain limitations and exemptions reduce the effect of this provision.

Exceptions to Article 22

First, as identified by University of Oxford academic Sandra Wachter and colleagues, the safeguarding supposedly ensured by Article 22 has limited applicability if the condition "solely" in "decisions made solely by automation" is interpreted narrowly.[76]

In fact, the authors suggest that Article 22(1) could be rendered inapplicable if there is even a trivial degree of human input in the decision-making of the data controller. For example, a hiring decision may be considered to have some level of human input if the employment manager decides to hire the candidate ranked first by an algorithm. Such an interpretation of Article 22

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[75]   Information Commissioner's Office, "Employment practices: monitoring at work draft guidance" (PDF), 12 October 2022, p50

[76]   Sandra Wachter, Brent Mittelstadt, Luciano Floridi, "Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation" [online], International Data Privacy Law, Vol 7, 2017

remains a possibility given the lack of case law concerning its practical implementation in the UK.[77]

Moreover, there are a series of exceptions to the application of Article 22, if the automated decision-making is either:

- necessary for the performance of a contract; or

- authorised by domestic law; or

- based on explicit consent

Once again, the AI Law Consultancy claims that these exceptions are "insufficiently defined", which "creates serious uncertainty about the scope of workers' rights".[78] Such sentiment is echoed by other legal scholars. For example, writing in the Oxford Business Law Blog, Samar Ashour notes that:

> much uncertainty may lurk in relation to the question of whether automated decision-making is necessary in each case.[79]

Enforcement of Article 22 in the UK and the EU

Perhaps in part because of the ambiguity surrounding the interpretation of Article 22, the right not to be subject to automated decision-making has never been legally enforced in the UK.

However, Article 22 of EU GDPR, on which UK GDPR is based, has been enforced in favour of employees in a handful of European cases. Notably, in 2021, a Dutch court decided in favour of a group of four Uber drivers (including three British nationals) who had had their accounts deactivated by an algorithm deployed by the company. When asked, Uber were unable to explain why this decision had been made. In response, the Amsterdam judge ordered Uber to re-employ the drivers because the company's decision was based solely on an automated process.[80]

Changes in the Data Protection and Digital Information Bill (no. 2)

In the UK, it appears as though the right not to be subject to automated decision-making might be altered by the potential passing of the Data Protection and Digital Information Bill (no. 2), which is currently making its way through Parliament.[81] The Bill plans to re-cast Article 22 as:

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[77]   As above

[78]   Robin Allen KC, Dee Masters, "Technology Managing People – the legal implications" (PDF), AI Law Consultancy, 11 February 2021, p74

[79]   Samar Ashour, "Artificial Intelligence: A Roadblock in the Way of Compliance with the GDPR?", Oxford Business Law Blog, 1 April 2021

[80]   Worker Info Exchange, "Dutch & UK courts order Uber to reinstate 'robo-fired' drivers", 14 April 2021

[81]   Data Protection and Digital Information (No. 2) Bill 2022-23 [as introduced]

a right to specific safeguards, rather than as a general prohibition on solely automated decision-making.[82]

This change has been described by authors at the legal charity Public Law Project as "significantly water[ing] down" Article 22.[83] Nonetheless, Carly Kind, director of the Ada Lovelace Institute (a research institute focusing on the social effects of AI and data processing), took a less extreme view on this change when giving evidence to the BEIS select committee in March 2023, arguing:

> The Data Protection and Digital Information Bill on the table at the moment changes that provision [Article 22] slightly. It does not eradicate the meaningful benefits that are there, but it could be stronger. [84]

The Bill has been considered in committee and is currently awaiting report stage in the Commons.[85] More information can be found in the Library's briefing paper on the Bill.[86]

[82] Written statement UIN HLWS672 [on Artificial Intelligence Regulation White Paper], 29 March 2023

[83] Ariane Adam, Tatiana Kazim, Data: the wrong direction, The Law Society Gazette, 23 June 2022

[84] BEIS Committee, "Post-pandemic economic growth: UK labour markets", 21 April 2023, HC 306 2022-2023, para 72

[85] Commons Library briefing CBP-9803, The Data Protection and Digital Information (No. 2) Bill: Commons stages

[86] Commons Library briefing CBP-9746, Data Protection and Digital Information (No. 2) Bill

4 Policy development and debate

4.1 UK Government white paper

Summary

The UK Government's March 2023 white paper ['A pro-innovation approach to AI regulation'](#), marks one of the UK's first steps towards creating a specific framework around responsible AI development and use.

The Government's approach is intended to strike a balance between regulation and innovation. Key points of the approach in the white paper are set out below.[87]

Clarity and coherence

The Government aims to bring clarity and coherence to the AI regulatory landscape. A key part of this aim is to produce a consensus definition of artificial intelligence.

Principles-based framework

The approach is guided by five principles: safety, transparency, fairness, accountability, and contestability.

Non-statutory implementation

Initially, the principles will not be put on a statutory footing to allow for flexibility and avoid rigid legislative requirements. These principles will be implemented by existing regulators, leveraging their domain-specific expertise.

Central support functions

The Government will establish central support functions to monitor and evaluate the regulatory framework's effectiveness, assess risks arising from AI, conduct horizon scanning, support testbeds, provide education and awareness, and promote interoperability with international frameworks.

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[87]   Department for Science, Innovation, and Technology, [A pro-innovation approach to AI regulation](#), CP 815, updated 22 June 2023

Agile and iterative approach

The Government intends to adopt an agile, iterative approach to continuously adapt the regulatory regime.

Collaboration and international alignment

The Government emphasises collaboration with regulators, industry, academia, and international partners to ensure coherence, support innovation, and protect citizens from cross-border harms.

Major proposals

Context-specific approach

The Government's white paper advocates a context-specific approach to AI regulation. Instead of applying general rules or risk levels to entire sectors or technologies, the UK Government plans to base future regulation on the specific outcomes that AI applications are likely to produce. For instance, the white paper proposes that an AI-powered chatbot used for customer service in an online clothing retailer should not be regulated in the same way as one used for medical diagnostics.

The Government argues that this context-specific approach will allow regulators to balance the risks associated with AI against the potential benefits of using it. During the white paper's consultation phase, stakeholders asked the Government to consider the opportunity cost of not utilising AI capabilities, especially in safety-critical operations across industries like heavy industry and personal healthcare. The Government hopes that being sensitive to context will prevent excessive regulation that could stifle innovation.

Cross-sectoral principles

The white paper establishes five key cross-sectoral principles that are expected to be implemented by existing regulators:

1. Safety, security, and robustness: Prioritising the safety and security of AI systems while ensuring their reliability and resilience.

2. Transparency and explainability: Making AI systems transparent and explainable to enable users and affected individuals to understand the reasoning behind decisions.

3. Fairness: Designing and using AI systems in a way that avoids unfair bias or discrimination and promotes equal treatment and opportunities.

4. Accountability and governance: Establishing clear lines of responsibility and accountability for AI systems, including appropriate governance mechanisms.

5. Contestability and redress: Ensuring mechanisms are in place to challenge and rectify AI-related decisions or actions that may have adverse effects.

These principles build upon the ethical AI principles of the OECD and aim to guide responsible AI design, development, and use.[88] The principles are also meant to complement existing laws and regulations, increase clarity, and reduce barriers for businesses operating across different regulatory domains.

Use of existing regulators

The white paper mentions multiple examples of existing regulators expected to oversee workplace AI usage, including the Information Commissioner's Office (ICO), Equality and Human Rights Commission (EHRC), Financial Conduct Authority (FCA), and the Employment Agency Standards Inspectorate (EASI).[89]

These regulators will be expected to apply the cross-sectoral principles proportionately within their respective areas of expertise. To achieve this, the Government intends to ask regulators to issue best practice guidelines and/or update existing guidance to provide clarity to businesses. This guidance should explain how the principles interact with existing legislation to support industry to apply the principles. It should also illustrate to businesses what compliance looks like.

In addition, joint guidance may be published for AI use cases that cut across multiple regulatory domains to support businesses operating within the remits of multiple regulators.

Given that not all principles are equally relevant in every context and conflicts between principles can arise, the white paper suggests that regulators will be allowed exercise their expertise and judgement to prioritise and apply the principles accordingly.

Non-statutory implementation

The white paper proposes that the five key principles will initially be non-statutory. Rather than directly integrating the principles into law, the Government intends to monitor the overall effectiveness of the principles and the framework. The Government anticipates that the model for providing the central functions will develop over time.

However the white paper acknowledges that the Government might at a later date introduce a new "statutory duty for regulators to have due regard to the principles".[90]

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[88] OECD, "Recommendation of the Council on Artificial Intelligence", 22 June 2019, s 1

[89] Department for Science, Innovation, and Technology, A pro-innovation approach to AI regulation, CP 815, updated 22 June 2023

[90] As above

Before introducing any statutory duty, the Government might consider exemptions to accommodate existing regulators, especially in areas like national security, allowing them to continue their domain-specific approach.

Central functions to support the framework

Responses to the Government's consultation ahead of the white paper, particularly from small and medium sized enterprises, emphasised the importance of central functions from the Government to monitor and coordinate the work of regulators.[91]

The functions identified by the Government were developed based on discussions with industry, research organisations, and regulators following the publication of an earlier AI policy paper in 2022.[92] In brief, the identified functions are:

- Monitoring, assessment, and feedback

- Support coherent implementation of the principles

- Cross-sectoral risk assessment

- Support for innovators (including testbeds and sandboxes)

- Education and awareness

- Horizon scanning

- Ensure interoperability with international regulatory frameworks

More detail on how each of these functions are intended to operate can be found in the white paper's Box 3.1.[93]

Responses

The Labour Party

In a June 2023 interview with TechMonitor, Lucy Powell, Labour's digital spokesperson, criticised the white paper as "not up to this task, and already out of date after only two months". [94] In an interview with the Guardian, Lucy Powell stated that "this technology [AI] is moving so fast that it needs an

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[91] Department for Science, Innovation, and Technology, A pro-innovation approach to AI regulation, CP 815, updated 22 June 2023. para 70

[92] Department for Digital, Culture, Media & Sport, Establishing a pro-innovation approach to regulating AI, CP 728, updated 20 July 2022

[93] Department for Science, Innovation, and Technology, A pro-innovation approach to AI regulation, CP 815, updated 22 June 2023

[94] Ryan Morrison, "Is Rishi Sunak's government ready to abandon its 'light touch' approach to AI regulation already?", TechMonitor, 7 June 2023

active, interventionist government approach, rather than a laissez-faire one".[95]

Labour MP Darren Jones is chair of the Business and Trade Select Committee and also chaired the advisory board of the Institute of Artificial Intelligence from 2019 to 2022. In a tweet on 29 March 2023, he summarised his concerns as:

> no new regulation, no new regulators, [and] no new money (except £2m for an innovation sandbox).[96]

BEIS Select Committee

The 2023 Business, Energy and Industrial Strategy (BEIS) Select Committee report 'Post-pandemic economic growth: UK labour markets' welcomed the Government's white paper on its approach to regulating AI.[97]

However, the report quotes Carly Kind, Director of the Ada Lovelace Institute, who highlighted concerns about the use of existing regulators:

> [Devolving implementation to the regulators] is a challenging proposal, given that we have more than 100 regulators, some of which have overlapping domains and some of whose domains leave big gaps… There needs to be consistency, and much more capacity and guidance provided to regulators for implementing any ultimate regulatory framework.[98]

The Committee also questioned whether existing regulators have the expertise to perform the functions proposed in the white paper. Finally, they query whether the Government has the adequate funds to appropriately staff these regulators, explaining:

> If regulators will need to recruit additional staff with such expertise, the Government should consider carefully whether they can do so from existing budgets without compromising other important regulatory functions.[99]

Information Commissioner's Office

In its response to the Government's white paper, the ICO stated that it "supports the Government's vision to make the UK the best place in the world to found and grow an AI business".[100]

Nonetheless, echoing the BEIS Committee's concerns, the ICO "would welcome further discussions with government on the funding required to

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[95]   Kiran Stacey, "AI should be licensed like medicines or nuclear power, Labour suggests", The Guardian, 5 June 2023

[96]   Darren Jones (@darrenpjones), Twitter, 29 March 2023 [accessed 5 July 2023]

[97]   BEIS Committee, Post-pandemic economic growth: UK labour markets, 21 April 2023, HC 306 2022-2023, p3

[98]   BEIS Committee, Post-pandemic economic growth: UK labour markets, 21 April 2023, HC 306 2022-2023, para 77

[99]   As above, para 82

[100] Information Commissioner's Office, The Information Commissioner's response to the Government's AI White Paper (PDF), 11 April 2023 , para 26

enable these proposals to succeed".[101] Furthermore, the ICO also asks for "clarification on the respective roles of government and regulators in issuing of guidance and advice as a result of the proposals in the AI White Paper".[102]

Equality and Human Rights Commission

The Equality and Human Rights Commission (EHRC) – a public equality watchdog and one of the Government's proposed AI regulators – has claimed that the white paper's safeguarding is "inadequate", and that its proposals "fall short of what's needed to tackle the risks to human rights".[103]

The EHRC proposes that the Government should provide "greater focus on human rights and equality, together with significantly more funding for regulators".[104]

Goodwin Procter

Multi-national law firm Goodwin Procter describes the white paper as "maintaining a light touch in terms of regulation". Moreover, it comments on the differences between the British and EU approaches to AI, noting that:

> This divergence in approach is likely to present challenges for companies currently operating in both markets, as well as for those looking to expand into the other market.[105]

Norton Rose Fulbright

A blog post on the website of another multi-national law firm, Norton Rose Fulbright, praises the white paper's proposals as "agile and pragmatic".[106] The Government's approach "allows [the UK] to integrate concepts that are working from other legislative initiatives such as the EU AI Regulation in updates to the guidance". The authors claim that it "seems unlikely the guidance will be unduly restrictive".

Subsequent Government actions

Since the publication of the white paper in late March 2023, it has been suggested that the Government's position on AI regulation has shifted towards a more cautious, risk-averse approach. Megan Stagman, associate director at the government advisory firm Global Counsel, told The Guardian:

[101] As above, para 25
[102] As above, para 14
[103] Equality and Human Rights Commission, "AI safeguards 'inadequate', watchdog warns", 27 June 2023
[104] As above
[105] Gretchen Scott, Hayley Davis, "Overview of the UK Government's AI White Paper", Goodwin Procter, 6 April 2023
[106] Marcus Evans, Lara White, "UK AI White Paper", Norton Rose Fulbright, 29 March 2023

> There has been a marked shift in the government's tone on this issue. Even since the AI white paper, there has been a dramatic shift in thinking. [107]

Notably, at the start of June, Prime Minister Rishi Sunak pushed for the UK to host a global watchdog on AI akin to the International Atomic Energy Agency (IAEA), as well as provide the base for a ground-breaking international AI safety summit in the autumn.[108] In mid-May, Downing Street acknowledged the "existential risks" posed by AI for the first time, after Sunak met with four of the world's most senior AI executives.[109]

4.2 Other proposals for regulation

In contrast to the white paper's non-statutory approach to AI regulation, multiple non-governmental reports have supported the introduction of statutory AI-specific legislation, either through amending existing laws or creating an entirely new AI act. The recommendations of some of these reports are summarised below.

AI Law Consultancy and the Trades Union Congress

Rather than advocating a general AI Act, the AI Law Consultancy report 'Technology Managing People – the legal implications' – commissioned by the Trades Union Congress (TUC) – suggests major alterations to many of the existing acts described in section 3 of this briefing.[110]

Data protection and UK GDPR

With regards to data protection, the AI Law Consultancy proposes amending GDPR to establish a universal right to personalised explainability for high-risk AI systems in the workplace. In addition, it proposes the creation of statutory guidance for employers on the interplay between AI, automated decision-making, Article 8, and key data protection concepts in the UK GDPR.

Preventing discrimination

Concerning anti-discrimination, the authors recommend that the Government introduce statutory guidance on preventing discrimination resulting from new technologies. The authors also recommend that the Government reverse the burden of proof in discrimination claims related to high-risk workplace AI systems, so that employers have to demonstrate non-discrimination. More

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[107] Alex Hern, Kiran Stacey, "No 10 acknowledges 'existential' risk of AI for first time", The Guardian, 25 May 2023

[108] Esther Webber, "UK to host major AI summit of 'like-minded' countries", Politico, 7 June 2023

[109] Alex Hern, Kiran Stacey, "No 10 acknowledges 'existential' risk of AI for first time", The Guardian, 25 May 2023

[110] Robin Allen KC, Dee Masters, "Technology Managing People – the legal implications" (PDF), AI Law Consultancy, 11 February 2021

radically, they argue that all actors in the AI development chain may be liable for discriminatory outcomes.

Role of trade unions

Finally, the AI Law Consultancy includes a specific set of recommendations concerning the role of trade unions in AI regulation. It suggests a formal data-gathering role for trade unions in relation to their members' data, recognition of trade unions as data subject representatives under UK GDPR, and a statutory duty for employers to consult trade unions when high-risk AI systems are deployed in the workplace.

TUC manifesto for AI

These conclusions of the AI Law Consultancy were adopted or adapted by the TUC in their own AI manifesto, 'Dignity at Work and the AI Revolution' (PDF), alongside proposals for a new "statutory duty to consult trade unions in relation to the deployment of high-risk AI and ADM [automated decision-making] systems".[111]

Future of Work All-Party Parliamentary Group

The All-Party Parliamentary Group for the Future of Work (FoW APPG) advocated explicitly for an AI-specific act in their November 2021 report 'The New Frontier: Artificial Intelligence at Work'.[112]

The APPG's proposed 'Accountability for Algorithms Act' (AA Act) would introduce an obligation for private and public sector employers to conduct and act upon pre-emptive Algorithmic Impact Assessments. This duty would be applicable from the initial stages of designing workplace AI systems, requiring thorough assessments beforehand and evaluations afterward to identify risks.

The aims of the APPG in proposing this AA Act were to strengthen basic protections for workers by addressing some of the issues raised in section 3 of this briefing. For example, the APPG proposes a right for workers to obtain comprehensive explanations about the purpose, outcomes, and impacts of algorithmic systems used in their workplaces, as well as a right for workers to be involved in shaping their design and implementation.

Echoing the AI Law Consultancy, the APPG also suggests additional collective rights for unions and specialist third sector organisations, such as a "freestanding right for unions to be consulted whenever 'high risk' AI tools are being introduced to workplace".[113]

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[111] TUC, "Dignity at Work and the AI Revolution" (PDF), March 2021

[112] All-Party Parliamentary Group for the Future of Work, "The New Frontier: Artificial Intelligence at Work" (PDF), November 2021

[113] All-Party Parliamentary Group for the Future of Work, "The New Frontier: Artificial Intelligence at Work" (PDF), November 2021, p17

Furthermore, the APPG also recommends strengthening the joint Digital Regulation Cooperation Forum (DRCF) with the authority to develop certification programmes, halt the use of certain technologies, and issue comprehensive cross-sectoral guidance.

BEIS Select Committee

The BEIS Committee 2023 report 'Post-pandemic economic growth: UK labour markets' contains a section dedicated to AI and Tech.[114]

Like the FoW APPG and AI Law Consultancy, the BEIS Committee recommends that businesses "conduct impact assessments to understand the scope and consequences of the use of new technologies in the work place".[115] The Committee did not specifically recommend how to introduce these assessments, but one possibility it identified was via the Data Protection and Digital Information (No. 2) Bill.[116]

In concordance with the APPG and AI Law Consultancy, the Committee recommends the introduction of a statutory right for workers to be consulted and notified when automated tech is used in their workplace, and it "encourage[s] employers to involve workers in the design and implementation of new workplace technologies".[117] Likewise, it proposes that implementation of new technologies should be done in partnership with trade unions where relevant.[118]

4.3 Parliamentary debate

Westminster Hall debate, April 2023

A Westminster Hall debate on the 'Potential impact of artificial intelligence on the labour market' was held on Wednesday 26 April 2023, led by Labour MP Mick Whitley. A Commons Library debate pack provides more information.[119]

Opening the debate, Mick Whitley criticised the Government's planned approach in the white paper as a "light-touch approach" that leaves all the work of implementation to "underfunded and overstretched regulators".[120] In

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[114] BEIS Committee, Post-pandemic economic growth: UK labour markets, 21 April 2023, HC 306 2022-2023, p13

[115] As above, para 39

[116] Data Protection and Digital Information (No. 2) Bill of 2022-23 [as introduced]

[117] BEIS Committee, Post-pandemic economic growth: UK labour markets, 21 April 2023, HC 306 2022-2023, para 39

[118] As above, para 38

[119] Commons Library debate pack, Potential impact of artificial intelligence on the labour market, 25 April 2023

[120] HC Deb, 26 April 2023 c393WH

its place he called for called for the Government's "principles" of AI regulation to be put on a statutory footing, rather than existing only as guidance.[121]

In his opening remarks, which he later disclosed had been written for him by ChatGPT, he warned of the risks of the unchecked use of workplace AI, saying:

> the implementation of AI in the workplace could result in the violation of workers' rights such as privacy, autonomy and fair pay. The use of AI to monitor and control workers could lead to increased exploitation, discrimination and the creation of a toxic work environment.[122]

A range of concerns and potential opportunities of AI were discussed throughout the debate. Responding for the Government, Minister for Enterprise, Markets and Small Business, Kevin Hollinrake, said that the Government was "committed to protecting workers" and pointed to existing protections in the Equality Act 2010 and reforms of GDPR contained in the Data Protection and Digital Information Bill.[123]

He reaffirmed the Government's commitment to the principles outlined in the white paper, including delivering on them through existing regulators, but disagreed that there was any need for new legislation, saying:

> the Labour party's natural position on this kind of stuff is to regulate everything as much as possible, whereas we believe that free markets have had a tremendous effect on people's lives right across the planet.[124]

General debate on AI, June 2023

A general debate on artificial intelligence took place on 29 June 2023. Employment rights were not a major focus of the debate. In opening the debate Conservative MP Matt Warman noted that employment was one of the areas where there may be challenges, but that:

> Employment, for instance, is already regulated, and whether or not companies use AI to augment their HR system, it is already illegal to discriminate. We need to make sure that those existing laws continue to be reinforced, and that we do not waste time reinventing the wheel.[125]

The Chair of the Business and Trade Committee Darren Jones (Lab) raised concerns about the potential impact of AI on workers, that "power and wealth will be taken from workers and concentrated in the already powerful, wealthy and largely American big-tech companies" and noting the fears associated with algorithmic management:

> There are too many examples today of technology being put upon workers, not developed with them. That creates a workplace culture that is worried about

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[121]   HC Deb, 26 April 2023 c393WH
[122]   HC Deb, 26 April 2023 c390WH
[123]   HC Deb, 26 April 2023 c410WH
[124]   HC Deb, 26 April 2023 c406WH
[125]   HC Deb, 29 June 2023 c478

surveillance, oppression, and the risk of being performance managed or even fired by an algorithm.[126]

Artificial Intelligence (Regulation and Workers' Rights) Bill 2022–23

On 17 May 2023 Labour MP Mick Whitley introduced the Artificial Intelligence (Regulation and Workers' Rights) Bill 2022–23 as a Private Member's Bill under the Ten Minute Rule. In introducing the Bill, he explained its purpose as being to strengthen workers' protections against "discrimination by algorithm", saying:

> This includes amending the Data Protection Act 2018 to explicitly state that discriminatory data processing is always unlawful; amending the Employment Rights Act 1996 to create a statutory right, enforceable in employment tribunals, that workers should not be subject to detrimental treatment as a result of the processing of inaccurate data; reversing the burden of proof in discrimination claims that challenge decisions made by AI; and making equality impact audits a mandatory part of the data protection impact assessment, which employers would also be obliged to publish.

> The Bill would establish a universal and comprehensive right to human review of high-risk decisions that have been made by AI, as well as a right to human contact when high-risk decisions are being made. Finally, it would protect workers from intrusion into their private lives by establishing a right for them to disconnect[127]

The Bill has not yet received a second reading.

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126   HC Deb, 29 June 2023 c483
127   HC Deb, 17 May 2023 c876

5   International regulation

5.1   European Union AI Act

The European Union (EU) is introducing legislation to regulate AI systems, spearheaded by its AI Act.[128] The AI Act would set legal obligations throughout the lifecycle of an AI system, including training, testing, validation, conformity assessments, risk management systems, and post-market monitoring.

In contrast to the UK's approach of using existing regulators, the EU intends to establish various new regulators, including a central European AI Board and national AI authorities in each member state. The EU is also proposing financial penalties for AI misuse of up to €30 million or 6% of global turnover.

The EU is taking a risk-based approach to AI regulation. The AI Act specifies four risk tiers: unacceptable, high, limited, and minimal. Systems deemed to pose an unacceptable risk are entirely prohibited. The use of CV-sorting software for recruitment is considered high risk while technologies such as using AI algorithms to identify workers' emotions are classed as unacceptable.

Moreover, AI systems would be subject to a long list of obligations if they can be used for any high-risk purpose (for example autonomous vehicles, medical devices, or critical infrastructure machinery).[129] Most notable of these obligations is the requirement for a comprehensive risk assessment system, as specified by Article 9 of the Act.

Finally, the AI Act's provisions are intended to apply to actors whose system outputs are used in the EU, even if the provider is based outside of the EU.

Progress

A draft version of the EU AI Act was first published in April 2021.[130] Following extensive consideration of the original proposal, a revised version of the Act

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[128]   European Parliament, "Artificial intelligence act" (PDF), June 2023

[129]   European Commission, "Regulatory framework proposal on artificial intelligence" (accessed 6 July 2023)

[130]   European Commission, "Proposal for a Regulation laying down harmonised rules on artificial intelligence", 21 April 2021

was approved by the European Council in December 2022.[131] On 14 June 2023, the European Parliament voted to adopt the text of the draft legislation.[132]

Since its June 2023 approval by the European Parliament, EU lawmakers have begun negotiations to finalise the legislation. According to a European Parliament briefing from 28 June 2023, these negotiations will likely include modifications to the definition of AI systems, expansion of the list of prohibited AI systems, and the imposition of obligations on general-purpose AI and generative AI models like ChatGPT.[133]

Nonetheless, it may be years before the Act is finally in force. According to global law firm Stephenson Harwood:

> Depending on progress through the EU institutions, the final AI Act may be adopted at the end of 2023 or early 2024 (ahead of the next Parliament elections). It will then likely have a 18-24 month lead-in period until it is in force (although some parties have been lobbying for up to 36 months). Realistically, it's unlikely to apply until mid to late 2025, early 2026.[134]

Responses

The EU's AI Act has been praised as a pioneering attempt to deal with an issue of global importance. For example, Kay Firth-Butterfield, Executive Director of the Centre for Trustworthy Technology, a part of the World Economic Forum, has stated:

> With this Act, the EU is taking the lead in attempting to make AI systems fit for the future we as human want.[135]

Nonetheless, critics of the AI Act have suggested that the EU is over-regulating AI, potentially stifling innovation. One group of leading tech researchers argued that the Act's definition of general-purpose AI systems is "significantly over-inclusive". [136] Meanwhile over 160 multi-national executives sent an open letter to the European Parliament in June 2023, raising concerns about the Act and saying that it may lead to AI companies leaving the EU:

> The draft legislation would jeopardise Europe's competitiveness and technological sovereignty without effectively tackling the challenges we are and will be facing ... In a context where we know very little about the real risks,

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[131] European Council, "Artificial Intelligence Act: Council calls for promoting safe AI that respects fundamental rights", 6 December 2022

[132] European Parliament, "MEPs ready to negotiate first-ever rules for safe and transparent AI", 14 June 2023

[133] European Parliament, "Artificial intelligence act briefing", 28 June 2023

[134] Stephenson Harwood, "Exploring the legislative landscape for AI – the EU's AI Act", 29 June 2023

[135] Spencer Feingold, "The European Union's Artificial Intelligence Act – explained", World Economic Forum, 30 June 2023

[136] Philipp Hacker, Andreas Engel, Marco Mauer, "Regulating ChatGPT and other Large Generative AI Models" (PDF), Fairness, Accountability, and Transparency (FAccT '23), 12 June 2023, p1114

the business model, or the applications of generative AI, European law should confine itself to stating broad principles in a risk-based approach. [137]

OpenAI founder Sam Altman likewise said that Open AI would "cease operating" in Europe if they could not comply with the AI Act.[138]

The place of the AI Act relative to existing legislation has also been raised as an issue. A 29 June 2023 article in The Verge tech magazine quotes several experts who suggest that the AI Act may be less effective than existing GDPR protections.[139] Other concerns have been raised that it may conflict with existing product safety regimes such as the EU Medical Device Regulations.[140]

5.2   US regulatory proposals

The US approach has been seen as lighter touch than both the EU and UK. An article by law firm Goodwin Procter summarised the state of AI legislation in the US as of 12 April 2023, stating that:

> For companies operating in the United States, the landscape of AI regulation remains less clear. To date, there has been no serious consideration of a US analog to the EU AI Act or any sweeping federal legislation to govern the use of AI, nor is there any substantial state legislation in force.[141]

In a Guardian article of 14 June 2023, Ben Winters, a senior counsel at the Electronic Privacy Information Center (a privacy research non-profit) is quoted as saying:

> We don't even have a clear picture that any of the 'regulation' of AI is going to be actual regulation rather than just support [of the technology].[142]

The article reported that "the lack of leadership on the issue in Washington is leaving the sector room to govern itself". Accordingly, the Guardian suggested that US senators seem keen to follow the advice of OpenAI founded Sam Altman, who appeared at a Senate Judiciary Committee hearing in May. Myers West of the AI Now Institute told the Guardian that:

> Suggestions for regulation, which senators applauded [Sam Altman] for during the hearing, would amount to little more than self-regulation.[143]

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[137]   Mike Butcher, "European VCs and tech firms sign open letter warning against over-regulation of AI in draft EU laws", Tech Crunch, 30 June 2023

[138]   Richard Waters, Madhumita Murgia, Javier Espinoza, "OpenAI warns over split with Europe as regulation advances", The Financial Times, 25 May 2023

[139]   Jess Weatherbed, "The EU still needs to get its AI Act together", The Verge, 29 June 2023

[140]   Julia Gillert, Jaspreet Takhar, "UK vs EU Approach to Regulating AI: From One Extreme to Another?", Global Compliance News, 13 April 2023

[141]   Martha Schreck, Martin Gomez, Stephen Charkoudian, "An overview of the landscape for US regulation of AI technology", Goodwin Procter, 12 April 2023

[142]   Johana Bhuiyan, Nick Robins-Early, "The EU is leading the way on AI laws. The US is still playing catch-up", The Guardian, 14 June 2023

[143]   As above

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