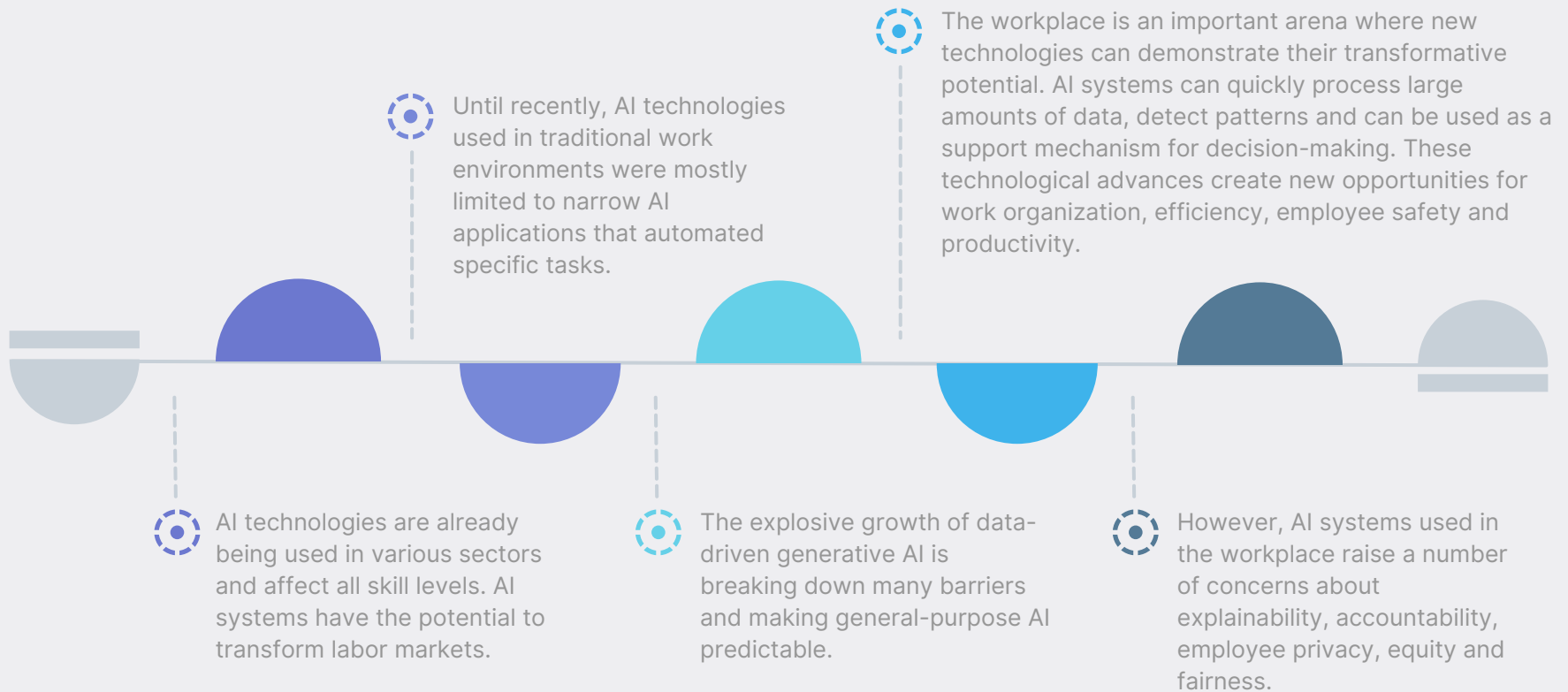


AI Applications and Risks in the Workplace

Advancing automation, digitalization and especially the use of Artificial Intelligence (AI) systems are bringing about fundamental changes in the way we live and work. While AI systems can be used to support progress and benefit society as a whole, they can also raise ethical concerns and cause harm, depending on how they are used and what purposes they serve.



Algorithmic Management

- Algorithmic management systems process large amounts of data in real time and make decisions based on complex rules and criteria.
- The data processed is detailed and the measurement criteria are often incomprehensible to both employees and managers.
- At this point, it is useful to distinguish between rule-based algorithms, where decision-making rules are explicitly stated, codified and therefore human-readable, and data-driven machine learning techniques, where rules are often expressed in complex mathematical functions that are not human-readable, performing tasks without explicit instructions. Machine learning techniques learn directly from data sets, which makes them prone to replicating biases they may contain. These models pose risks to the people affected, as they often lack quality training data and the datasets they are trained on are different from the data to which they are applied.
- While it is likely that the developers behind machine learning models do not know exactly how their models arrive at individual conclusions, by shaping the technical components or introducing institutional safeguards, disclosures can be obtained, safeguards can be enforced and workers' interests can be protected.

What is Algorithmic Management?

1

Regardless of the level of development and automation,



2

when data on employees or the business process feeds algorithms,



3

when algorithms process and elaborate this data and



4

when these two elements support the coordination and control of employees exercised by management, a practice is considered “algorithmic management”.

ALGORITHMIC MANAGEMENT

It consists of new uses of existing technologies rather than technical innovation. Algorithmic management utilizes a variety of AI tools.

RISKS

- Changing the balance of power and work hierarchies within the company
- Redefining tasks and roles
- Potentially making some job profiles redundant
- Blurring subcontractor-outsourcing organization boundaries
- De-skilling and loss of employee autonomy, lack of innovation
- Goals set by algorithmic management increase workload and work intensity
- Increase in work accidents due to time pressure and stress
- Violation of the boundary between work and private life
- Reduced human interaction
- Encouraging competitive behavior among workers instead of cooperation
- If the data is biased, prejudice is multiplied, systematic discrimination is faced
- Higher skill requirements for workers
- Lack of specialized AI skills
- Increased surveillance and monitoring of workers
- High risk of false positives
- Lack of accountability and accountability
- Employees are concerned about losing their jobs
- Violation of the right to protection of personal data
- Difficulty in quantifying productivity
- Uncertainty in assigning those responsible for decisions based on algorithmic management
- Damage to company reputation due to faulty algorithmic management decisions
- Legal, ethical and cybersecurity risks



MONITORING AND SURVEILLANCE OF EMPLOYEES

- Measuring physical performance (via smartphones, GPS-based applications, wearable devices)
- Recording of employee movements, working speeds and breaks
- Monitoring of digital behaviour through emails, internal chats
- Tracking employees' keyboard strokes, application usage and web history

MONITORING THE PHYSICAL HEALTH AND MENTAL STATE OF EMPLOYEES

- Measurement of heart rate and blood pressure via wearable devices equipped with sensors
- Recording emotional and mental state through face scanning and voice recognition devices

MAKING ASSUMPTIONS AND DECISION MAKING

- Predicting the performance and abilities of employees
- Providing consultancy to managers to select nudging behaviours as a result of analysing employee behaviours

BENEFITS

- Optimising operations and better workplace organisation
- Facilitating decision-making processes
- Providing data-driven insights
- Improving work quality
- Increasing the demand for specific skills and the need for training
- Reducing human error
- Reducing prejudice and strengthening fairness at work
- Reduction of boring and repetitive tasks
- Cost savings on routine and repetitive tasks
- Improved physical security
- Increasing productivity, supporting performance improvement
- Fast adaptation to organisational and operational changes

APPLICATION AREAS OF ALGORITHMIC MANAGEMENT

- Consultancy Companies
- Logistics
- Transport
- Transport
- Delivery Services
- Storage
- Retail Sector
- Food Sector
- Accommodation Sector
- Call Centres
- Finance Sector
- Public Services (Health and Law Enforcement Services)
- Production

European Union Legal Frameworks



GENERAL DATA PROTECTION LEGISLATION

- It lays down binding rules on the protection of personal data.
- It obliges employers to inform data subjects about data processing activities and provides data subjects with a number of individual rights.
- Given that AI objectives and functioning depend on the data available, the General Data Protection Regulation provides a basic framework to mitigate the negative consequences of AI at work by setting out the principles of legality, fairness, transparency, purpose limitation, data minimisation and accuracy.



EUROPEAN UNION AI ACT

- It sets out risk-based rules to regulate the use of AI systems.
- It categorises AI systems according to their potential risk and level of impact on individuals and society.
- Tools used to identify emotion at work (except for medical or safety purposes) and social scoring systems are banned due to unacceptable risk.
- Certain AI systems used in employment and labour management that are considered high risk due to their significant detrimental impact on health, safety and fundamental rights are permitted, but subject to a number of safeguards. Providers will have to ensure that their products comply with requirements related to risk management, testing, technical robustness, data training and data management, transparency, human oversight and cyber security. Employers using high-risk AI systems will be obliged to provide human supervision and inform affected employees and their representatives about their use.
- Limited risk AI systems and general purpose AI systems will only be subject to transparency requirements.
- A worker who is adversely affected by an employer's decision based on the outputs of a high-risk AI system will be entitled to an explanation of the main elements of the decision taken and the role of the AI system in the process. However, it is explicitly stated that the AI Act is without prejudice to the rights of workers under other laws.



PLATFORM WORKERS DIRECTIVE

- The directive on improving working conditions in platform jobs aims to ensure the correct classification of the employment status of platform workers and regulate the use of algorithms by digital labour platforms.
- Platforms will be prohibited from processing certain types of personal data through automated monitoring or decision-making systems - for example, workers' emotional or psychological state or private exchanges with co-workers and representatives - and from collecting data when the worker is off the job.
- Platforms shall be obliged to inform their employees and agents in writing about the automated systems in place, the categories of monitoring, the types and parameters of decisions made by the technology, and the grounds for decisions to restrict, suspend or terminate their accounts or refuse a payment.
- Platforms will have to provide human oversight of decisions made by automated systems, and employees will have the right to challenge such decisions.
- Decisions to restrict, suspend or terminate workers' accounts will have to be taken by a human being.
- Workers will be entitled to compensation and platforms will have to create a facility for workers to communicate with each other and their representatives without such communications being monitored.
- The rules on algorithmic governance will cover all persons, employees and self-employed persons engaged in platform business.

➤➤ Recommendations of Labour Unions

Arguing that the EU AI Law is inadequate, the unions propose the drafting of an EU directive to set minimum standards for the design and use of algorithmic systems in the workplace.



HIGHLIGHTS

Legality: Should the use of AI be authorised?

Validity: Are the decisions taken by the AI valid?

Enforceability: Are decisions made and actions taken by the AI enforceable?

Responsibility: Who is responsible?

- When there is a 'human in control', whose interests does this human represent?
- How can a line be drawn between 'employee monitoring' and employee surveillance?



RECOMMENDATIONS

- The collective bargaining rights of trade unions as well as the rights of workers' representatives to information, consultation and participation should be strengthened.
- The rights of human decision-makers must be protected.
- Employees should be given the right to control and review algorithmic decisions.
- The use of algorithmic management practices should only be permitted if negotiated with trade unions and/or workers' representatives.

Source: [https://www.europarl.europa.eu/thinktank/de/document/EPRS_BRI\(2024\)762323](https://www.europarl.europa.eu/thinktank/de/document/EPRS_BRI(2024)762323)



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