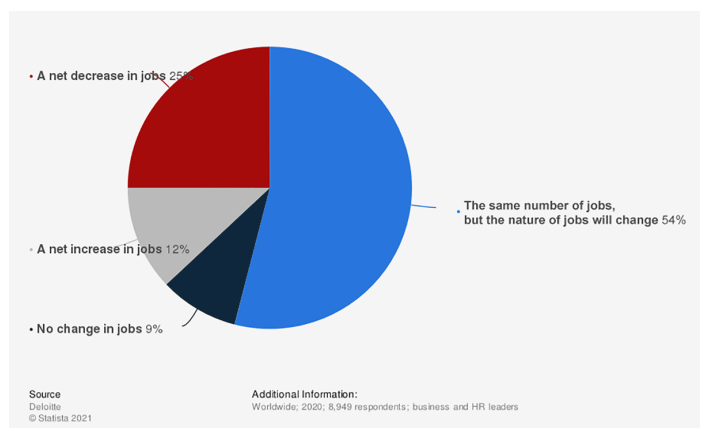


FORUM:	General Assembly
ISSUE:	Measures to Establish Comprehensive Legal Frameworks in the Accountability of Artificial Intelligence
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POSITION:	President of General Assembly

Introduction

Innovative technological developments such as information and communication technology, big data, and the Internet of Things are making rapid changes across society. Modern society is experiencing rapid development by improving productivity, creating new business models, and increasing the efficiency of problem solving through these technologies. The rapid development of this modern society has enabled an intelligent information society with a large amount of data and computing technology. The development of computing technology that can utilize the vast amount of data asking price has led to the rapid development of artificial intelligence. However, the problems related to this are unfolding not only by field such as copyright, ethics, information protection, and privacy that may occur using artificial intelligence, but also philosophical and controversial issues such as discussion on the personality of robots and human control.

The artificial intelligence industry is forming a kind of living world. As in any other industry that uses information technology, competition is taking place to preempt artificial intelligence in order to provide new services and products by building a platform based on various information technologies. From this point of view, what is required is the normative system of subjects who want to make profits using artificial intelligence. Furthermore, it is important to think about how the data, which is the nutrient of artificial intelligence technology, is used by artificial intelligence, how it generates data close to expertise from simple data from expression and communication, and whether the results made by the artificial intelligence system collecting and analyzing all these data are always the right results. As such, it is necessary to explore the problems that arise as artificial intelligence-based systems become

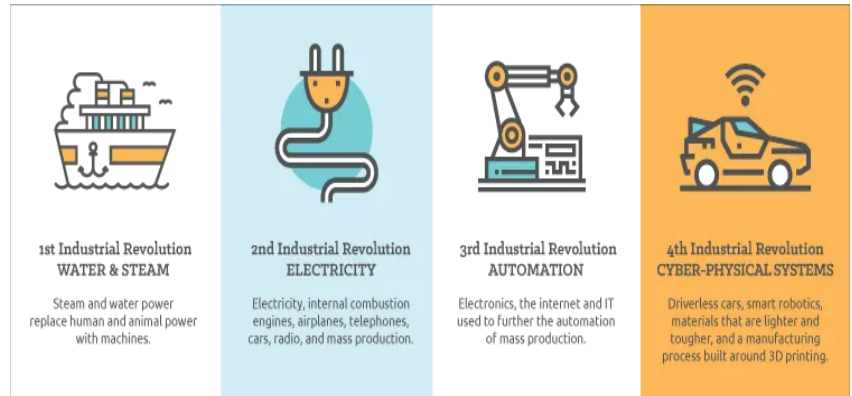


Projected AI Impact on the Number of Jobs in the Organization in the Next 3 Years by Business Leaders

commonplace and the causes of them, and to present normative approaches and realization plans for them.

Background

The Fourth Industrial Revolution and the intelligent information society have been mentioned in all fields, such as big data and the Internet of Things (IoT). The existing IoT, Cloud Computing, Big Data, and Mobile (ICBM) paradigms are now shifting to artificial intelligence, which is expected to provide many conveniences in



The Fourth Industrial Revolution is made by AI, IoT, robot technology etc.

people's lives. Artificial intelligence technology is due to the development of computer technology and the vast amount of data accumulated by humanity. In particular, data is the most important resource throughout the entire process from the development of artificial intelligence to the learning stage. Based on data, artificial intelligence technology constitutes a series of industrial ecosystems. In other words, the market and the ecosystem, which encompasses all researchers and developers, sellers, business operators, and users who study artificial intelligence technology, are acting organically and interactively. However, this rapid advancement has not been without issues. For example, in July 2015, Google's artificial intelligence photo service, one of the world's largest search engine companies and technology companies, caused controversy by recognizing black women as gorillas. In March 2016, Microsoft, a computer software company, faced controversy when the artificial intelligence bot Tay was misled in the community environment and gave an extreme responses that could cause a controversy over "supporting genocide." Even in 2022, the White House warned that big data analysis and machine learning could lead to discrimination in credit ratings, employment, and education.

As such, artificial intelligence is posing a great challenge to the existing normative system. In this situation, each country and various experts are conducting various discussions to establish principles to secure social stability and prevent future risks without hindering technological development.

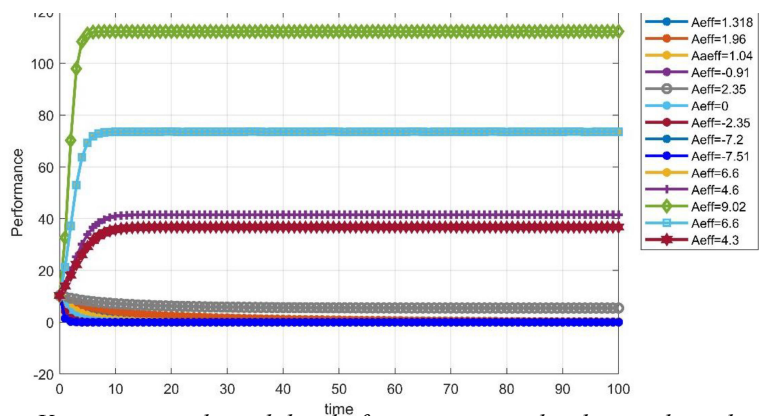
Problems Raised

The Impact of Flawed Data on AI

Even if human behavior is sound or justified, if the input data is not sound, the artificial intelligence system may derive a result that deviates from its original purpose in that it has no choice but to learn based on the input data. If a level of acceptable behavior, as defined by social norms, is carried out during the design and learning process of artificial intelligence, the soundness of the data should be fundamentally secured. It seems more reasonable to establish a new artificial intelligence data authentication system in order not to overlook the fact that information provided by state agencies and organizations can be integrated and provided, but that the efficiency of the system can be improved only when various data can be provided, both public and private. The procedure for this is carried out transparently and fairly through thorough public opinion, so that the data management practices do not lead to monitoring and control. Therefore, public institutions in charge of data management should be able to serve as supervisory bodies, in which private experts also participate. If the input data is not sound, it is like humans developing a system that is harmful to humanity themselves. It is necessary to evaluate quality data, select appropriate data sources, and establish criteria to analyze and store them.

Ethical Considerations and Social Impact

The so-called platform ecosystem, which is formed based on information and communication technology, is creating innovative results by combining services in other fields centered on openness and connectivity. The artificial intelligence ecosystem is showing a similar pattern. Its impact is significant because the artificial intelligence ecosystem consists of



Various networks and the platform ecosystem they have achieved

researchers who study related technologies, producers who develop and produce systems or devices based on research, users who use them, and markets and countries. Researchers or developers should have professional ethics or work ethics based on engineering ethics that can consider the social impact of the new system as experts, users should not abuse these technologies, and the market should form a fair competition and people-centered order. The state should revitalize related research and markets in a public legal position with other actors and form a fair market order along with responding to side effects. Furthermore, international relations should be able to consider international norms, establishment of technology standards, fair trade, and securing international markets.



Particularly in light of the impact of artificial intelligence on society, technological advances will bring profound changes to humanity's existing values and social order, accompanied by ethical confusion as well as laws and institutions. Establishing related norms is difficult because it requires consciousness and constant management of all ecosystem members from the development stage of technology to the use of the stage.

International Actions

One Hundred Year Study on Artificial Intelligence by Stanford University

The Stanford Centennial Project, a research that has been underway since the end of 2014, aims to provide the basis of science and technology for AI to understand the potential implications of development over a 100-year period. In its report, Stanford researchers described the changes that AI is expected to bring to transportation, home, healthcare, education, welfare and development, public safety, employment, and entertainment by 2030. It specifically addressed the impact of AI in everyday areas such as autonomous vehicles, AI-based medical diagnosis, and surveillance systems. It mentions the importance of trust, warning that artificial intelligence in each field will cause significant ethical and social problems, including privacy issues. It recommends the need to increase human understanding of AI through training experts, consider the fairness and security of AI systems that addresses the gap in using AIS and the safety of the system, and enhancing public/private R&D funding to promote the active introduction of AIS. Furthermore, the report illustrates policy and legal considerations, including privacy, encouragement and protection of technological innovation, civil and criminal responsibility, artificial intelligence agents, certification and licensing systems, labor and taxes, and political and ideological impacts. In response, it strongly recommends that the government, companies, and international organizations cooperate to create standards and regulations.

Key Players



European Union (EU)

On January 12, the European Union (EU) Parliament decided on the legal status of artificial intelligence robots as 'electronic people' and resolved to set related technical and ethical standards. Later, on February 16, the resolution was passed at the plenary session of the European Parliament, and it was confirmed that EU-level norms would be



Flag of EU

established. This decision started with the perspective that special legal status should be considered in the long run, emphasizing the need to clarify legal responsibility for the spread of artificial intelligence robots. This resolution sees the need for an ethical framework for the design, production, and use of robots, and calls for the establishment of an ethics code for robotics engineers, a code for related research ethics committees, and a charter for designers and users. In other words, it emphasizes not only the problem of artificial intelligence itself, but also the ethics of its users.

United States

The U.S. was joined by the Council of Economic Advisers, the National Policy Council, the National Economic Council, the Office of Management and Budget, the Office of Science and Technology and the Office of the President's Task Force to publish "Preparing for the Future of Artificial Intelligence" and "Artificial Intelligence, Automation, and the Economy." Prior to "Preparing for the Future of Artificial Intelligence," the U.S. held a joint workshop led by the Office of Science and Technology (OSTP). The report mainly offered 23 recommendations, which covered utilization for the public interest, promotion of artificial intelligence R&D, regulation by experts, management framework development, public-private partnerships and investments, education, and security. Above all, he emphasized the need to promote public understanding of AI and ensure that AI systems are used for the public good. Later 'Artificial Intelligence, Automation, and the Economy' covered the impact of AI on microproducts, labor markets, and the technological environment, emphasized the importance of institutions and policies, and suggested policy directions to safely and appropriately utilize AI. In particular, it predicted that the demand for jobs that can provide relevant data will increase, noting that AI's ability improves according to data quality.

Possible Solutions



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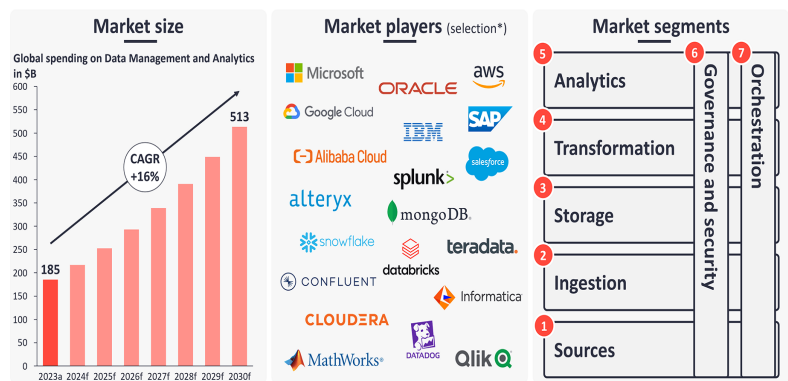
Establishment of Integrated Legal System for AI Management

Artificial intelligence may harm humans due to their complex combination with various data and breaking the boundaries between humans and robots. As artificial intelligence enters human life more and more deeply, the need for legal regulation to manage it is growing. The role of the law here is not to govern and assign obligations to the internal relationship of the robot society based on artificial intelligence robots or their autonomous will. Instead, it is to solve the problem of how to manage artificial intelligence and robots through human-centered legal norms, and to give rights and obligations to humans. Based on these basic ideas, it should be possible to dissolve the acceptable principles of conduct, sound data learning, controllable system principles, and clear responsibility principles. These principles can be realized by establishing basic principles for artificial intelligence robots.

The first point to consider will be concept definition, but it will be replaced by 'autonomous computer or robot' and will present the core content. Based on various trends of discussion and the principles summarized above, it is necessary to establish an integrated legal system such as the so-called 'autonomous robot law'. This is based on the fact that even if an autonomous robot is developed, its core is a computer. The law must deal with the obligations required of robots. In other words, an obligation does not mean that the robot is legally responsible when the obligation is not fulfilled, but rather a methodological meaning that enforces an algorithmic system that causes an action as a force properly required by the robot. Therefore, the right that comes with the obligation and responsibility cannot be given to the robot. This is because what appears to be a robot's right, such as "Robots can reject malicious commands," is also the same concept as eventually forcing programming. The contents of what is enforced here include the registration and certification of the robot, the obligation to establish standards for safe algorithms, and the disclosure of algorithms upon request for legitimate purposes.

Governance and International Cooperation for Data Management

If core principles and basic rights and obligations are in place, the law should be able to consider governance-level discussions and international environments. In order to realize the principle of sound data learning, there must be a reliable public institution to manage it. Therefore, the establishment of an institution in charge of the data authentication system should be considered. In other words, a separate artificial intelligence or robot



Data Management and Analytics from different market players



committee with expertise can be established in that the administrative organization has changed appropriately according to changes in the technology environment. In particular, the organization must operate with the private sector to secure reliability and obtain various information in real time. Furthermore, international cooperation should be made to respond to transnational problems that may arise in an ever-changing environment and to share related information, and a standard certification system should also be established in consideration of the preoccupation of the international stage and the revitalization and support of Korean companies.

Glossary

Artificial Intelligence

Artificial intelligence allows computers to imitate human intelligence activities. In other words, it refers to the fields of computer engineering and information technology that enable computers to think, learn, imitate, and develop themselves that human intelligence can do.

ICBM

To revitalize related industries by storing data collected by Internet of Things (IoT) sensors in the cloud, analyzing it with big data analysis technology, and providing appropriate services in the form of mobile device services

Data Authentication System

A process of identifying the initial data source

Fourth Industrial Revolution

It refers to the next-generation industrial revolution led by artificial intelligence (AI), Internet of Things (IoT), robot technology, drones, autonomous vehicles, and virtual reality (VR).

Platform Ecosystem

A platform ecosystem is a complex system with a fundamental structure that affects its behavior, function, and evolution over time.



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