

In the recent years, computer architectures constituted partly through a wide variety of devices getting connected to the Internet have come to process an extensive amount of data.

Artificial Intelligence (AI) has enabled computers to learn from data accumulated in computer architectures connected to devices. AI-powered computers have produced various types of digital information through recognition, inference, dialog and generation based upon learning. Content thus provided in the form of digital information mainly refers to movements of people and equipment that were not identified in the past, situations of products and services provided therethrough, behaviors and attributes of people who use products and services, and cities and towns where we live.

Business processes remaining in silo will come to be mutually connected, optimized and sophisticated through data shared across fields and organizations in a network of interrelated systems that are powered by AI technologies (hereinafter referred to as "AI Systems"). Eventually, this is expected to significantly contribute to solving social issues identified in the Sustainable Development Goals (SDGs) by the United Nations such as those related to the environment, circular economy, and human rights.

On the other hand, AI systems incorporated into a network are immanently subject to complicated, rather than simplified, use, operation and management. AI systems pose risks of infringing personal privacy as well as harming diversity and fairness beyond imagination. As a result, AI systems may have a negative impact on society in some cases.

Also, AI systems evolve to becoming capable of learning from a significant amount of data and processing in a more sophisticated approach, and thus raise hopes. There is a concern about facing a backlash amid the expectations that human beings may depend upon AI systems beyond the capability and the scope of appropriate use of AI systems serving properly. Anxieties about negative impacts are undermining public trust in AI systems that can exist only to serve people and enrich society.

As a result, many countries and many organizations have established principles and rules on using AI systems and data with the aim of recognizing negative and positive impacts from the utilization and considering appropriate responses, and have worked on balancing the benefits and risks.

The BIPROGY Group AI Ethics Principles

The BIPROGY group, as a company group to create a sustainable society using foresight and insight to unlock the full potential of technology, aims to achieve a society equipped with social systems to enable everyone to live happily through digital commons (shared assets of society). The Group will create digital commons through promoting our business with three social impacts as our guide: Resilience (Viable and resilient autonomous distributed environments); Regenerative (Regenerative systems for a net positive society); and, Zero emissions (Environmental contributions and reduced environmental loads using digital technologies).

AI systems indispensable for creating social systems are expected to enrich many people's lives in society by augmenting human capabilities and creativity through supporting in a sophisticated manner. It is noted that what is aimed at is enabling a human-centered society with AI systems existing as a support.

The BIPROGY group aims to deliberate upon both benefits and drawbacks delivered to society by AI systems and appropriately address risks together with stakeholders before unlocking various possibilities of AI systems use for the purpose of supporting a society where all can live happily with AI systems accepted. The Group hereby announces the AI Ethics Principles (hereinafter referred to as the "Principles") in this light.

The Principles are applicable to the entirety of our businesses that leverage AI technologies. We comply with the Principles in developing, providing and utilizing AI technologies developed by other companies as well as by us that support our businesses, or delivered in installed AI systems or through services by other companies.

AI technologies in the Principles refer to the entirety of the technologies to support AI systems that perform intelligent behaviors boosted by harnessing data such as those related to recognition, inference, dialog, and generation.

The BIPROGY Group officers and employees will endeavor to do the following:

- 1. Unlock potential of data and AI technologies together with business ecosystem partners that aim to create a sustainable society. We will recognize positive and negative impacts on users and society of AI systems and share with stakeholders such as business ecosystem partners, general users, and external experts and take necessary measures so that AI systems we provide will become widely accepted in society.**
- 2. Provide examples and internal AI training to employees to develop human resources who can appropriately identify and consider measures to handle benefits and risks of AI systems.**
- 3. In providing AI systems, give due consideration not to harm the life, body, or property of users or a third party. Also, we will respect data subject rights and will give due consideration so that disadvantage will not be imposed on a data subject by abusing dominant bargaining position that we may obtain as a result of providing AI systems.**
- 4. In deliberating upon AI system roles, we will respect human dignity and autonomy of individuals, and consider defining appropriate roles between humans and AI systems in terms of the scope and the method, to prevent users from excessively depending upon AI systems.**
- 5. In handling data needed for AI systems, give consideration to ensuring security without compromising privacy. Also, we will remain meticulous about the data quality and pay attention not to use inaccurate data.**
- 6. Recognize that decisions made and contents generated by AI systems may contain biases and give careful consideration to fairness so that individuals and groups are not unreasonably discriminated against. We will also pay attention to the data quality used for learning, the verifiability of AI system inputs and outputs, and the explainability of AI system decision or generation results in order to attempt to ensure transparency.**

- 7. In using and providing AI systems, assess benefits and risks of AI systems for each business, and work on guidelines and rules as needed. Also, we will continue to monitor the situations and will take necessary measures.**

- 8. We will continuously revise these Principles through discussions with stakeholders such as business ecosystem partners, general users and external experts, in light of receptivity fluctuating amid social trends interacting with legal and regulatory trends.**

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