

Report on Networking Event for Sharing AI Governance Practices and Challenges

On March 7, 2023, Institute for Future Initiatives, The University of Tokyo held a "Networking Event for Sharing AI Governance Practices and Issues".

With the rise of generative Artificial Intelligence (AI), the need for AI ethics and governance has increased, and discussions are taking place in various companies and government organizations from AI principles to their implementation, including in Japan and abroad. However, the use of AI and the practice of AI governance is largely related to society. Therefore, it is important to promote discussions based on the issues that Japanese companies and governments perceive rather than simply referring to preceding discussions in Europe and the United States.

This networking event was designed to provide a forum for companies that are implementing or planning to implement AI governance, as well as for other people interested in the utilization of AI, to gather and discuss current issues in the implementation of AI governance.

After a keynote speech by Dr. Hiroaki Kitano (SONY) and sharing of practices by participants, the discussion of issues surrounding AI ethics/governance took place as a round table. The facilitator was the founder, Dr. Arisa Ema (Associate Professor, Institute for Future Initiatives, The University of Tokyo).

Why "Resilient" and "Responsive" AI?

In his keynote address titled "Toward Realization of Resilient and Responsible AI," Dr. Kitano began by introducing a discussion on resilient AI. Dr. Kitano unpacked the need for crisis-response AI from the perspective of the planetary and national crises surrounding modern society.

He emphasized the critical state of the global environment, which has not improved despite the coronavirus disaster lockdown, which will began in the second quarter of 2020 CO2 emissions have only returned to the level of 10 years ago, and are now returning to normal due to the easing of coronavirus measures. This shows that quantitative controls alone, with the current economic structure, will not solve the problem, as noted by Dr. Kitano. In addition, the probability of the next pandemic increased as the loss of biological diversity increased. In many cases, pandemic risks are caused by contact with wildlife, and the loss of biodiversity increases this risk by reducing habitats.

Dr. Kitano sees one major challenge as how Japan can contribute to such a global crisis and cooperate with other countries. Of course, AI and data alone will not solve this problem, but no one can deny that AI and data will play a major role.

However, regarding the crisis that Japan is facing, it is likely that there will be large-scale earthquakes as well as wind and flood damage due to climate change in the future. If this is the case, we should consider how to reduce the damage and recover from it. For example, measures such as using digital AI to create a global network for disaster mitigation will emerge as an upcoming issue.

In other words, AI resilience is necessary because, as we move forward in addressing planetary and national crises in this way, the digitization and AI of social infrastructure will be promoted; as a result, the resilience of these digital infrastructures will become a major issue. Dr. Kitano stated that it is necessary to create fair, accountable, transparent, and responsive AI to ensure resilience.

Concluding his keynote address, Dr. Kitano referred to generative AI. He stated that what is happening now is a historical technology transformation and that dominance, bias, data trust, and accuracy are the challenges of generative AI. He concluded that, as mentioned above, trustworthy AI is essential for the further development of civilization, and for this reason, international collaboration is needed to address the issues surrounding AI.

Initiatives of each company

This was followed by short presentations from the participants that focused on their own initiatives.

Japanese characteristics of AI ethics and laws/Naohiro Furukawa (ABEJA)

Mr. Furukawa, who is involved in legal ethics practices related to AI, explained the situation surrounding AI ethics in Japan, noting the lack of progress in AI implementation, the gap between AI developers and end users that arises from the B2B structure, and the characteristics of Japanese companies that tend to be risk-averse.

- A methodology for companies to achieve AI fairness fitting for the Japanese industrial structure/Ryo Harashima (University of Tokyo/Deloitte Touche Tohmatsu LLC)

Mr. Harashima raised the issue of fairness in AI, based on Japan's industrial structure, which requires close communication between companies working together on AI development projects. He emphasized the need to reevaluate the different structures that are suitable for system development.

Actions for AI Risk Governance Practices/Hiroaki Sakuma (Robust Intelligence)

Robust Intelligence offers solutions to prevent risk aversion and bureaucracy, which are characteristic of the Japanese AI market. The company is currently conducting case studies both in Japan and abroad. Mr. Sakuma stated that utilizing such tools was expected to promote communication by visualizing AI risks and the measures to deal with them.

AI Governance Practice at Rinna/Satoshi Funayama (Rinna)

Rinna, which develops and provides AI character "Rinna," generative AI models and AI services, has added creativity to its existing ethical principles. Sharing its Japanese Stable Diffusion release experience, Mr. Funayama stated that while governance efforts can be relatively flexible and speedy in a start-up, resource constraints make it difficult to determine how far and what to do, and that it is important to keep up to date with the latest information.

- Unconscious Bias Issues on AI development and Privacy Protection/Shoji Mima (Hitachi Consulting)

Mr. Mima, who provides consulting services on AI ethics, shared some of the challenges that he faces in the field. For example, when introducing an AI system for interviews, sensitive data must be collected to evaluate unconscious biases. They also mentioned the difficulty in validation when the model deteriorated during operation.

Overcoming the challenges of knowledge from data/Hidetoshi Mishima (Mitsubishi Electric Corporation)

Dr. Mishima introduced the AI ethics policy and quality guidelines developed by Mitsubishi Electric, Japan. The company does not create guidelines but promotes AI ethics and guideline education, including outside the company, to make it part of the company's culture. This initiative is based on the belief that it is important not only for those who receive data and develop AI to take responsibility but also for those who provide data.

Introduction: AI Ethics Impact Assessment and One-vs-One Bias Mitigation/Hiroya Inakoshi (Fujitsu)

Fujitsu has been working on AI ethics since the initial stages of its global development. The

published "AI Ethics Impact Assessment" takes an engineering approach to managing AI ethics and AI risks by understanding the interactions between humans and AI and capturing the risks that arise in those interactions. Dr. Inakoshi introduced a fairness algorithm to determine what constitutes fairness when combinations of multiple attributes exist.

- Case studies of AI service management using the Risk Chain Model/Takashi Matsumoto (University of Tokyo)

Mr. Matsumoto of The University of Tokyo introduced the risk chain model developed at the University of Tokyo. This framework focuses not only on ethics but also on achieving business and social values simultaneously, addressing the life cycle of AI and encouraging multi-stakeholder consensus-building. He also introduced a validation process already underway with companies and communities.

- Theme: Developing key personnel to practice AI ethics/governance/Hiromu Kitamura (CDLE)

As the leader of the AI Legal Group of Community of Deep Learning Evangelists (CDLE), which is the largest AI community in Japan, Mr. Kitamura described the development of human resources to practice AI ethics and governance. The most important part of AI ethics and governance practice is the separation of the three categories of "what should be made into rules," "what cannot be made into rules," and "what should not be made into rules. The most important qualities are the ability to have an awareness that transcends cognitive limitations and a sense of balance that allows one to judge the direction of an organization.

Japanese Companies Face Challenges in Implementing AI Governance

The second part of the "Roundtable to identify issues surrounding AI ethics/governance" began with comments from international guests.

Professor David Leslie of the Alan Turing Institute in the UK raised the issue of how accessibility to data, computers, and knowledge bases would work in an AI ecosystem. Therefore, it is necessary to develop data infrastructure, ensure interoperability, and build an innovation ecosystem that incorporates these elements. However, by leveraging multi-stakeholders, we will incorporate human resources with various levels of skills. He stated that citizens with information and policymakers must also be included.

Questions for Japanese businesspeople included the part that links the innovation ecosystem to the local, and whether the involvement of communities that provide input into the development of the system is secured or exists within the innovation ecosystem.

Dr. Rebecca Finlay of the Partnership on AI also stated the need to think broadly about ecosystems. She also posed a question to Japanese businesspeople: What do you want to know about responsible AI deployment and what are the challenges in Japan regarding responsible AI development?

One of the participants commented that "it is hard to know where to take the initiative" is a common issue among Japanese companies. Moving forward is easier when there is a unified code of conduct. However, as an organization, the question of what kind of structure is best for moving forward must first be addressed in practice. In response, there was a suggestion that Risk Management , AI Business , and Data Science departments should work in unison, or that the Audit department, which oversees corporate governance, would be the key.

There is also the issue of differences in resources and costs between large and small companies. Some said that it would not make sense for just one company to practice it due to Japan's industrial structure, and that the major issue would be how to involve providers and related parties. Other companies already practicing AI governance have introduced their respective use cases. Of course, the issues change for each company and use case, but the discussion shows the necessity of sharing them in such a forum.

One interesting aspect that emerged in the discussion was the confirmation of what constitutes successful governance. What should these criteria be? Certainly, if it is not engaged in, the discussion diverges. In this regard, Robust Intelligence, which provides a framework for risk assessment, first divides the risks that must be managed into three categories: "AI ethical issues," "operational risk issues," and "security risks to the AI itself. If these are put into practice, governance will be successful. Sharing these evaluation criteria is an essential part of the practice.

To summarize the discussion, Professor Leslie said that we need to face the risk of a failing planet motivated by environmental sustainability, as Dr. Kitano stated in his keynote.

Dr. Finlay stated that discussions on AI ethics and responsible AI require consideration of how this technology can be used in the future. This examination clarifies the responses to ethics. She also highlighted the importance of multi-stakeholder gatherings for discussions.

Dr. Kitano stated that data and computational resources must be viewed globally. Diverse, equitable, and transparent datasets are common. This enables everyone to share high-quality data. He stated that these discussions need to be continued.

Finally, Dr. Ema, who served as a facilitator, mentioned the issue of gender. No women among those who gathered at this time gave presentations. Certainly, there are problems with industrial structure. However, the root of the challenges that Japan faces is a lack of understanding and practice of diversity. She summarized that it is not only a problem for women, but that he would like people to not only talk about fairness but also practice it.

