May 2022

JDLA Office

Study Group 'AI governance and its Evaluation'

Report on the Session #7 (Phase Ⅱ)

## 1. Introduction

The Japan Deep Learning Association establishes study groups as a forum for deepening knowledge and discussing domestic and international policy trends related to artificial intelligence (hereafter AI) and Deep Learning (hereafter DL). This study group, 'AI Governance and its Evaluation,' defines 'governance' as a system of management and evaluation by various actors and launched a study group in July 2020 to investigate what forms of governance are possible to help build trustworthy AI systems, and the phase Ⅱ began in September 2021.

In the seventh meeting (Feb. 24, 2022), Mr. Takatomo Sakakibara from Community Link spoke on "The Utilization of Technology by Citizens for Community-based Activities" in the first half. In the second half, Mr. Masayoshi Sakurai of ZIAI spoke on "The Efforts to Prevent Suicide by Utilizing AI." This report is a reconstruction of these topics and a record of the discussion.

## 2. The Utilization of Technology by Citizens for Community-based Activities

In the first half, Mr. Sakakibara spoke about the utilization of technology by citizens for community-based activities.

### About the NPO Community Link[1]

Community Link engages in activities to promote urban development and an information-orientated society, it lists its aims as *Connecting People, Connecting Communities and Connecting through ICT.* Until now, the group mostly engaged with self-government activities has been people in their eighties, and the integration of IT into these activities has struggled to gain traction. However, in recent years the next generation who are more comfortable with IT have begun to participate, and it is our aim to be commonplace for the next generation to be able to participate in a more mutual and self-help style. It aims to create a society where technology is used naturally and appropriately.

### The usage of LINE's chatbot as part of the disaster preparedness drills in the Ohara Katsuragi area as an example

[1]Community Link, https://communitylink.jp/

The Ohara Katsuragi area is in the Kita-Ku, Kobe City, and was developed as residential land shortly before the Great Hanshin Earthquake. While the population grew with the development, now it is suffering from the ageing population like other areas. However, while the overall population of the area is aging, new frameworks for autonomy and development are progressing nevertheless.

The following issues are present in community activities:

1. The aging of participants in autonomous community activities
2. Shortage of new members
3. The difference in values between generations
4. The Covid-19 pandemic has made meetings and visits difficult

Line's chatbots was one solution to the above problems. This activity began before the Covid-19 pandemic.

1. Lowering participation barriers (Year 1)
2. Disaster drills with coronavirus prevention in mind (Year 2)

The community opens a LINE account, and utilizing the LINE API robot, the participants can collect information, exchange details and talk with one another. Based on the information sent through to the local disaster headquarters, information in the area can be confirmed and the relevant action decided upon.

While LINE was chosen because it was thought to be easy for young people to use, almost ninety per cent of the majority of disaster community members who are around the age of eighty also use LINE already, so there was no problem in chatting with the robot. The account used is an official one so all of the aggregated data from training can be deleted by deleting the account and there is no need for members to link with each other on the platform.

In actual conversation, once the training has commenced, the area, age group and gender of the participants are assembled and then they can submit information either by text or in a photo format. Information can be reported even in a non-disaster declared situation.

**Challenges and improvements for the chatbot**

We are aware of the following three points and are addressing them.

- Handling personal information
- Incorrect images being sent due to operational mistakes
- Responding to WEB and smartphone questions

We are still improving system functions. For example, Micro:bit as the Line beacon at evacuation centers has built IOT monitoring system that registers the evacuees as they arrive.

In the future, we hope to use this system to assist in caring for roving elderly people. Public assistance will be required for this system to work. At the moment, the Takarazuka City Town Development Council is promoting and conducting a trial of the system for disaster management.

As well as creating a framework for self-help and mutual assistance, we are hoping to create cooperation with administrative services in the form of mutual assistance. We are also participating in activities such as creating systems that utilize AI for Kobe City's crisis management office.

## 3. Suicide Prevention Using AI

In the second half, Mr. Sakurai of ZIAI spoke on the efforts to prevent suicide by utilizing AI.

### About ZIAI[2]

ZIAI has been established to prevent violence towards women in the slums of India, and carried programs for them since Feb 2020. When the project was canceled due to Covid-19, its focus was shifted to Japan's domestic social issues and suicide prevention.

In 2019, there were 55 suicides in Japan per day, one of the worst rates globally.[3] Initial activities were to search hints through identifying keywords amongst social networks and one-to-one counseling. This process revealed that there is no one cause of suicide and identifying all causes can be difficult.

While considering the question of why Japan has a higher suicide rate when India has worse circumstances, the idea that it was less the problem and more how the problem is being looked at was born. Eliminating financial stress and bullying are of course important but maybe doing that alone is not enough to prevent suicide. There are all sorts of challenges in life and people need to know how to deal with them correctly. It was realized that supporting each one to face problems and find solutions would give hints on how to solve other problems.

ZIAI was established as a non-profit organization that aims for technology to help people to love themselves and enjoy their lives.

### Recent efforts in suicide prevention

[2] ZIAI, https://www.ziai.jp/
[3] Ministry of Health, Labor and Welfare 'Suicide Rates in 2019', r2h-1-6.pdf (mhlw.go.jp)

One problem is that the number of counselors and counselling centers is woefully insufficient. Nationwide the response to the 2018 survey on SNS chat service response rate showed the figure to be between 2.7 and 21.4 per cent which is an exceedingly low rate. For someone undergoing mental strain, this low rate of counselling staffing is a major issue and it is thought that AI usage could boost this rate to the 100% milestone by 2030.

Using AI assisted counselling methodology, it is hoped to create a shift away from the limited hours specified by professionals or via counselling center counters. :

- Preliminary questions asked by the AI to assess risk.
- AI counselling for low-risk cases
- Sending high-risk people to professional counselors as a priority case

As a group aiming at creating the above points, it's important to develop partnerships with other NPOs. ZIAI is involved with groups of non-profit counselling services and plays an important role for connecting counsellors with clients. There is a need for the AI to have dialogues with low-risk clients, and also to evaluate the level of the risks. Its development has been undertaken in partnerships with research organizations and universities. The mechanism is planned to build as an open API associated with related NPOs and local governments nationwide, and it aims to achieve a 100% chat response rate by 2030.

The following four steps are being considered for inclusion in the development roadmap. ZIAI's mission is to expand the mental safety net and currently it has been working on suicide prevention. In the future, it is necessary for there to be a shift toward preventing suicidal thoughts themselves.

- Step1：Prioritization automation (starting with a demonstration experiment)
- Step2：Having recommendation functions similar to those that exist
- Step3：Having recommendation functions for conversations
- Step4：Autonomous AI chat functions

**The challenges for and significance of NPOs**

Being an NPO makes it possible to work on higher public interest projects than for-profit organizations. What sets ZIAI apart is that for-profit companies have many limitations such as needing to consider fee from users and to gain stakeholder approval. This has made it difficult for NPOs to provide their data to for-profit companies. There can also be fierce competition between counselling services vying for the same grants and funding programs which leads to a disinclination to share data between NPOs. On the other hand, the Ministry of Health, Labor and Welfare to will only issue funding to organizations which are offering counselling. This is why ZIAI was established as a short-term, zero income, NPO that

does not provide counselling services.

There are two issues for NPOs that we are aware of:

- Creating 0 to 1 changemakers
  While there are fund or existing programs that have shown success, there are few fud opportunities for programs with new frameworks. This makes creating change difficult.
- Professional resource allocation
  A lot of professionals work to make the world more convenient, but there needs to be efforts made to reduce the suffering in the world as well.

## 4. Summary from the Organizer and main comments from the participants of the study group

The 7th meeting focused on AI governance and the activities of citizens. The following question and answer session was centered around these topics.

**Discussion on "The utilization of technology by citizens for community-based activities" by Mr. Sakakibara**

- Incentive design and support for NPOs
  - ✓ Inquires increase as the number of achievements of an NPO increases. Due to the declining population, public services, self-help and mutual aid services are all decreasing. Therefore, to improve community services a quasi-public service with ICT, that optimizes methods is the best way forward.
  - ✓ The position of NPOs in the future will be important as up until now the private-self-help and mutual help framework sector was immature and relied on the support of volunteers.
- Has the gap in generational thought been considered?
  - ✓ A constant concern is the thought that the memory of the Great Hanshin Earthquake will fade in time. As the generation of people with no direct memory of events now gives birth to children, it is getting increasingly difficult to motivate people to think about this issue. However, we think it is possible to use technology to predict and potentially avoid future crises.
  - ✓ In the future we hope to be able to create trigger events. One example is a mechanism that allows Alexa to monitor electrical usage in the toilet of an elderly person and calls out if an irregularity is detected. We hope to create transformation by integrating technology into daily life.
- Is there a gap in technology between Tokyo and regional areas and if so, what can be

done about it?

- ✓ While it cannot be said that this is true across the board, there is certainly a shortage of IT professionals in regional areas. On the other hand, their IT departments are often located in urban areas.

- In a disaster, wouldn't specialist apps be useful?
  - ✓ The LINE is commonly used in Japan and will be more practical than a specialist app that regular people may be unfamiliar with.
- Is it useful to have a standard way of thinking?
  - ✓ Technical standards are necessary. As open-source code and programs are commonly used, working with a community that has strong technical knowledge is preferable.

**Discussion on "The efforts to prevent suicide by utilizing AI" by Mr. Sakurai**

- The incentivized design and support needed to run an NPO
  - ✓ Finding people who want to get involved and, who is willing to work for social rewards rather than financial one is key. That being said, even if a person is hired it can be difficult to keep working together unless mutual goals and small combined successes can be established. More financial and staffing support is needed. Adequate framework support would also be helpful.
- Are there regional differences in suicide rates?
  - ✓ Currently the addresses of people using counselling services are unavailable so it is impossible to know if there is a regional difference.
- When introducing AI, what are the set criteria for performance and quality for implementation?
  - ✓ At the moment there isn't a realistic one, a step-by-step implementation along with the PoC process holds possibilities thought. While the response speed is currently sufficient, questions remain about quality evaluation. Currently, groups of professional counselors are evaluating the result of PoC through the lens of ethical perspectives.
- Is it useful to have a standard way of thinking?
  - ✓ NPOs have limited resources, so it can be difficult to conduct risk assessment and maintenance. This is particularly true for new projects where identifying risks can be very critical, and it should be proceeding with external know-hows.
  - ✓ Securing specialists is always challenging and measures need to be considered in an efficient way. Frameworks can be useful in identifying risks as well as evaluating tolerances and considering countermeasures.

The discussion of AI Governance domestically and internationally will continue through this study group.

Written by Rie Ishii

Translated by David Shield

＜The 7th session of the Study Group＞

Date/Time: February the 24th (Thursday) 14:00-16:00(On Zoom）

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- Topic 1: “The Utilization of Technology by Citizens for Community-based Activities” provided by Mr. Takatomo Sakakibara (Community Link)
- Topic 2: “The Efforts to Prevent Suicide by Utilizing AI” provided by Mr. Masayoshi Sakurai（ZIAI）
- Questions and Discussion