

Report

New Innovation Created through Collaboration with Startups

Activities of Generative AI Special Interest Group

#Innovation Creation #Co-creation and Open Innovation #Generative AI

Highlight

Generative AI has attracted attention in recent years as an enabler for innovation in a variety of industries. Meanwhile, as generative AI advances on almost a daily basis, Hitachi has established a Special Interest Group to address the latest technology and business models and to work on and implement ideas for innovation through consultation with startups and other businesses. With members from across Hitachi, the group is seeking to grasp the changes to the structure of industry brought about by generative AI while also taking steps to identify new business opportunities.

This article reports on an event for startups to make pitches relating to generative AI that was hosted by the Corporate Venturing Office at Hitachi, Ltd. in September 2023. It also describes the aims and activities of Hitachi's Special Interest Group.



Creating Innovation through Generative AI

Hitachi launched its corporate venturing*1 activities in 2019, seeking to create innovations that will resolve challenges facing customers and wider society by collaborating with promising startups working in a wide range of fields, combining Hitachi's own technologies and customer base with innovative technologies and business models. Since then, Hitachi has dialogued with more than 5,000 startup companies and launched 86 collaborative projects with Hitachi business units and group companies, ranging from the joint development of technology to opening up markets with new service concepts.

This has included an event for startups to make pitches relating to generative artificial intelligence (AI) jointly hosted in September 2023 by the Corporate Venturing Office at Hitachi, Ltd. and Plug and Play Japan*2.

Generative AI can learn the patterns and rules contained in existing data and then use this to generate content in the form of text or images. It is mainly based on deep learning (DL) and has diverse uses that encompass product development, manufacturing process improvement, marketing, and decision making. It is also expected to find a wide range of uses in the future due to its ability to come up with novel ideas or multifaceted perspectives that would be unimaginable with past practices.

This was the third startup pitch event, the previous two (Carbon Management and Metaverse/Web 3.0) took place in 2022, and was held at the Shibuya offices of Plug and Play Japan. Six generative AI startups with operations both in Japan and overseas participated in the event along with staff from Hitachi, 40 attending in person and a further 60 online, mainly from the generative AI Special Interest Group (SIG) that has a membership of approximately 200 from across 26 business divisions. Kiyoshi Kumagai, Senior Manager at Hitachi's Corporate Venturing Office, welcomed the attendees by saying, "I hope today's event will be a catalyst for uncovering new business opportunities through generative AI in partnership with startups and will lead to future collaboration."

This was followed by pitches from the six startups in which they conveyed their visions and strengths through presentations and question and answer sessions.

MoBagel (USA)

Based on its mission of creating a sustainable future through the use of AI, MoBagel supplies generative AI platforms and applications. While the development of generative AI applications requires a wide range of human talent, including data scientists and engineers, MoBagel's Code Generative AI/ML Platform for Enterprise can substitute for this talent, supporting the no-code development of generative AI applications through the interactive use of chat screens. These applications can be applied to tasks such as demand prediction for supply chain optimization or the detection of faults in factory equipment. With approximately 10,000 users across more than 5,000 companies, the software has also been adopted for many educational applications including at universities and for corporate training.

Launchable (USA)

With the goal of speeding up software development, Launchable has developed generative AI for shortening the testing process, the most time-consuming part of the development cycle. The company's generative AI can be applied to programs that are subject to daily modifications by large numbers of engineers, identifying sections that require testing and speeding up the feedback process by only performing the highest priority tests. Specifically, it uses AI to automate and optimize the software development process in ways that include utilizing machine learning (ML) to identify problematic code by analyzing logs that record the results of program execution, using this to speed up the testing process by providing feedback to human engineers.

Kasanare, Inc. (Japan)

To undertake digital transformation (DX) in Japan through the use of generative AI from a customer perspective, Kasanare is seeking to use large language models (LLMs) to provide ideal user experiences. In practice, this involves providing personalized support optimized for specific issues that works by equipping the chatbots used in roles such as customer support with copilot functions tailored to individual users that can anticipate their needs and make suggestions. One of Kasanare's strengths is the support it provides for customer's management decision making. Having undertaken around 30 rapid and low-cost proof-of-concept (PoC) trials using simulations based on company-specific data, this includes the use of prototyping to assess whether the adoption of generative AI is worthwhile. As the customer-specific no-code copilots can be managed using a dashboard for software-as-a-service (SaaS) functions, the AI is able to generate high-quality responses while keeping post-installation operating costs down.

alt Inc. (Japan)

This company uses its own LLM called LHTM-2 to develop and supply digital clones and P.A.I.*3, a Personal Artificial Intelligence that reflects the intellect and thinking of individuals. A digital clone is constructed from an "average model" that has been trained on large amounts of data and is then skewed by feeding it a person's actual life log data so that it will reflect that person's thinking and habits. In response to questions about a person's work from team members or others, the digital clone can deliver answers that replicate with high accuracy what the original person would likely say. This frees the person themselves to focus on more creative work. LHTM-2 is a high-performance Japanese language model and the company is also using it as a platform for developing AI GIJIROKU (AI-based minute taking) and other generative AI services.

ELYZA, Inc. (Japan)

Having had its own generative AI since even before ChatGPT arrived on the scene, ELYZA has been working on the practical deployment of language generative AI and to establish a competitive advantage for the countries and companies that use it.



Its numerous achievements in the use of generative AI have included a reduction of about 30% in the amount of work that goes into the preparation of recruiting documents at Mynavi Corporation and an approximate 50% boost in the efficiency of some tasks at a JR West Customer Relations Co., Ltd. call center.

In the field of research and development, the company is spearheading efforts to accelerate LLM development in Japan, including work on creating Japanese language versions of non-Japanese LLMs that have as many as an order of magnitude more parameters than Japanese language LLMs and publishing its findings. It created a Japanese version of the Llama 2*4 LLM from Meta that was trained on English-language sources and made it available for commercial use in August 2023.

MOSTLY AI (Austria)

MOSTLY AI produces and supplies synthetic data*5, an essential tool in the era of data privacy. Synthetic data retains the same structure, statistical facts, and correlations as the data used for training but eliminates all one-to-one relationships with the raw data to remove all risk of reconstruction. By using no-code generative AI with built-in privacy protection mechanisms to generate the synthetic data and putting it to flexible use in industries such as healthcare, insurance, or banking that handle sensitive personal information, MOSTLY AI is fostering data innovation by providing insights into personal data.

- *1 Activities whereby a large corporation encourages open innovation by collaborating with or supporting startup companies from outside its corporate group.
- *2 Venture capital with a global network. In Japan, it supports open innovation by around 50 companies from offices in Tokyo, Kyoto, and Osaka.
- *3 P.A.I. is a trademark of alt Inc.
- *4 Llama 2 is a trademark of Meta Platforms, Inc.
- *5 Artificial data created using training data (raw data). Once training has taken place, data can be generated indefinitely, and is not simulated data.

Potential for Collaboration to Accelerate Resolving Societal Challenges

The networking session that took place after the pitch event provided a congenial atmosphere for researchers and others from Hitachi Group companies and the representatives of the startups to exchange ideas and information.

One Hitachi staff member who attended the event commented, “As they have leading-edge experience and knowledge matching use cases that my own department is looking at, I would like to try it out in-house first.” Another said, “They have the environment and expertise for rapidly implementing ideas and putting them to the test. I would like to talk more about the possibility of working together.” From the startups, Marcel Rasinger of MOSTLY AI commented, “It was a worthwhile time and gave me the opportunity not just to present, but also to talk directly. Being able to talk directly with engineers from different business units, including giving a demo, fostered discussion about the potential of synthetic data and the future benefits for society.” Similarly, Wataru Nakamura of ELYZA said, “While we have had opportunities to tell people about our work before, it was rare that we get the chance to talk about the significance of what we are doing that extends to things like corporate culture and the ways of thinking we hold dear. That made for an extremely refreshing event.”

The plan for the future is to arrange for one-on-one meetings between Hitachi business divisions and startup companies to discuss opportunities for collaboration with a view to getting projects in place by the end of 2023. By partnering with leading startups, Hitachi hopes to continue its work on resolving a wide variety of societal challenges in the future.



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