

Yahoo! JAPAN News Strengthens Countermeasures against Inappropriate Comments Using In-House AI and Proprietary Supercomputer “kukai”

- Detection rate of rule-violating comments improved by approx. 2.2 times, supporting Yahoo! JAPAN News’ initiative to offer a safe forum for healthy discussions -

Yahoo Japan Corporation (“Yahoo! JAPAN”) has further strengthened countermeasures against rule-violating comments such as violent, discriminatory, or excessively indecent remarks in Yahoo! JAPAN News Comment (hereinafter “Comment Section”). The Comment Section is provided by Yahoo! JAPAN News, one of Japan’s largest Internet news distribution services.

Leveraging 11 million comment data, Yahoo! JAPAN News has begun utilizing the newly-developed and cutting-edge AI, a judgment model using deep learning with natural language processing (hereinafter “Judgement Model”), as well as an independently developed supercomputer “kukai” that specializes in deep learning (hereinafter “Supercomputer”).

Using actual comment data from one week, Yahoo! JAPAN News compared this Judgement Model with a conventional judgment model (AI) based on natural language processing using machine learning, and found that the number of violating comments detected increased by about 2.2 times.



In order to create a forum for healthy discussions, Yahoo! JAPAN News has carried out site patrols using human power and machine learning (AI), prioritizing articles that have been reported as violations by users, articles with a high number of views, and articles in specific

genres; and has been deleting violating comments and suspending accounts of malicious users mainly by human power.

The results of this Judgment Model will also be used to improve the order in which comments are displayed, so that the comments that Yahoo! JAPAN News wants more people to read, such as those that trigger a multifaceted understanding of the news, will be displayed at the top of the list in the Comment Section.

Meanwhile, since November 2019, Yahoo! JAPAN News has used a judgment model (AI) based on natural language processing using deep learning and the Supercomputer “kukai” to automatically detect comments that are not highly relevant to articles, instead of manually carrying out site patrols and deleting such comments.*¹

*¹ [The Forefront of “Countermeasures against Inappropriate Comments” on Yahoo! JAPAN News — What Changes Have Natural Language Processing Researchers Seen after the Introduction of Machine Learning with Supercomputers?](#) (Japanese Only)

Since 2007, Yahoo! JAPAN News has implemented the comment function that allows users to post their opinions and thoughts on articles. Through this function, it aims to provide users with opportunities to gain new perspectives and develop their own opinions by being exposed to different opinions through the news.

In addition, Yahoo! JAPAN News sets a comment policy*² that dictates usage rules for the comment section as well as the examples of rule-violating comments. Yahoo! JAPAN will continue to offer services that can be used by all users with a sense of security by reviewing the policy in response to social situations and other factors, strengthening human site patrols, and utilizing cutting-edge natural language processing technology.

*² [Yahoo! JAPAN News Comment Policy](#) (Japanese only)

■ About “kukai,” a supercomputer that specializes in deep learning

Developed by Yahoo! JAPAN, the highly energy-efficient supercomputer that specializes in the utilization of deep learning earned second place in the global energy-efficiency ranking GREEN500 (Announced in June 2017). Theoretically, “kukai” has nearly 225 times more computing power than the previous in-house environment using graphics processing units (GPU) while it shows world-leading computing performance per power consumption (as of June 2017), thus has the advantage of being able to perform large-scale deep learning processing in a shorter time and at a lower cost.

- [Yahoo! JAPAN Develops a Supercomputer That Specializes in Deep Learning, Taking Second Place in the Global Energy-Efficiency Ranking “Green500”](#) (June 19, 2017) (Japanese Only)

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