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## Panasonic Develops Unsupervised Machine Learning Technology that Automatically Learns Optimally Tuned Model according to Size and Complexity of Given Data

Accepted for NIPS 2017, the world's leading international AI technology conference.

**Osaka, Japan** - Panasonic Corporation today announced that it has developed a new unsupervised machine learning technology that automatically learns the optimally tuned model according to the size and complexity of the given data. This technology can be applied to real world situations, where the available data is small and its complexity is unknown. This development was realized at the AI Solution Center, Business Innovation Division. Our paper on this technology was accepted for NIPS 2017 (Neural Information Processing Systems), which is the top international academic conference in the AI and machine learning fields.

There are many cases in our main business areas (e.g., home appliances, residential, automotive, and B2B solutions), where it is difficult to apply AI technology because of the limitations of the available data (e.g., size limitation, unknown complexity). Since our technology can automatically obtain the solution with an optimally tuned model, burdensome manual tuning of the model can be significantly reduced. Therefore, it can be expected that the application range of AI technology can be spread more widely. In the future, by accelerating research and development of this technology, we will work on realizing AI technology that can be used in real situations such as familiar IoT equipment and systems.

This technology is a result of joint research with Professor Hiroki Arimura (Hokkaido University), Associate Professor Takuya Kida (Hokkaido University) and Lecturer Issei Sato (The University of Tokyo).

The details of this technology will be presented at NIPS 2017 (to be held from December 4, 2017 in Long Beach, USA).

### About Panasonic

Panasonic Corporation is a worldwide leader in the development of diverse electronics technologies and solutions for customers in the consumer electronics, housing, automotive, and B2B businesses. Celebrating its 100th anniversary in 2018, the company has expanded globally and now operates 495 subsidiaries and 91 associated companies worldwide, recording consolidated net sales of 7.343 trillion yen for the year ended March 31, 2017. Committed to pursuing new value through innovation across divisional lines, the company uses its technologies to create a better life and a better world for its customers. To learn more about Panasonic:

<http://www.panasonic.com/global>

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