For Immediate Use

NEC Corporation
Sumitomo Mitsui Banking Corporation
The Japan Research Institute, Limited

Trials for data analysis automation using AI technology completed

NEC Corporation (NEC), Sumitomo Mitsui Banking Corporation (SMBC) and The Japan Research Institute, Limited (JRI) announced today that they have completed trials for a new method of data analysis that makes use of Predictive Analysis Automation technology, a new Artificial Intelligence (AI) technology (*1) developed by NEC. The companies announced that they have commenced discussions towards the full-scale introduction of this technology, which will enable them to better understand diversifying customer needs, and propose better products and services.

SMBC has so far predicted the needs of individual customers and proposed services to match those needs by analyzing a massive amount of data accumulated within the bank (such as customer information, access logs, and deposits/withdrawals history) and open data (*2), in a cross-sectoral manner using machine learning technologies (*3).

However, with conventional machine learning technologies, there was an issue in that carrying out such an analysis for a single topic or theme required several data scientists for 2 to 3 months. SMBC therefore   had a difficulty to conduct the analyses sufficiently detailed for appropriate prediction of diversifying customer needs, the background behind these needs, and the timing and approaches by which customers prefer to have   service proposals.

In response to this issue, the captioned trials were conducted, as a part of a collaborative project between NEC Data Science Research Laboratories and SMBC's US West Coast team, who is responsible for research into advanced technologies. As a result, the trials showed the new technology could dramatically shorten the timeframe of data analyses to around 1 day, from 2 to 3 months so far, with precision equal to or higher than that which had been previously achieved. Furthermore, it was also confirmed that specific grounds for predictions, which had not been available with conventional AI technologies, could be obtained in use of the new technology.

NEC's Predictive Analysis Automation is a technology that, utilizing AI, will fully automate advanced analysis work currently carried out manually by skilled data scientists, including the generation of characteristic samples (*4) from Big Data and model creation (*5), in a shorter period of time

SMBC believes this technology will significantly increase the frequency of validating hypotheses regarding customer needs, and will add new value to the customers based on analyses of a diverse variety of data that was too complicated to be analyzed until now.

In light of the findings in the trials, NEC, SMBC, and JRI have commenced discussions on system design, etc., towards the full-scale introduction of Predictive Analysis Automation technology. Moving forward, the companies will continue to invest their efforts into utilizing the latest cutting-edge AI technologies, along with other advanced technology initiatives, with the aim of proposing better services to their customers.

Notes

*1:

Press release: NEC announces new AI technology brand, "NEC the WISE"
http://www.nec.com/en/press/201607/global_20160719_01.html

NEC's AI (Artificial Intelligence) Research
http://www.nec.com/en/global/rd/crl/ai/index.html

*2: Open data
Data that is made openly available with usage rules that enable secondary use, in a format that is optimized for machine decipherment.

*3: Machine learning technologies
Technologies and methods whereby we attempt to achieve the same kinds of learning abilities with computers as are exhibited naturally by humans.

*4: Characteristic sample design
The task of converting raw data accumulated in databases, etc., into data in tabular form that can be input into a machine learning system

*5: Model creation
The task of extracting characteristic rules and patterns from a data set using machine learning technology