June 26, 2018

For General Release

Information Services International-Dentsu, Ltd.

ISID Launches Provision of Explainable AI (XAI) Solution "simMachines"
State-of-the-art AI having both Prediction and Justification abilities is now available in Japan for the first time

Information Services International-Dentsu, Ltd. ("ISID" Head office: Minato-ku, Tokyo; President and CEO: Setsuo Kamai) announces that it is the first company in Japan to become a distribution partner of the Explainable Artificial Intelligence (XAI) solution "simMachines" developed and provided by simMachines, Inc., (Head Office: Illinois, United States of America; CEO: Robert Zieserl).

With simMachines' XAI proprietary algorithm, simMachines provides not only highly accurate predictions but also the justification behind them.

simMachines

Background
In recent years, Artificial Intelligence (AI) predicting a variety of events with high accuracy applies in a wide range of areas. However, the mainstream AI technologies such as Deep Learning are unable to explain with the reasons for such predictions. That is why the technologies are considered difficult to be applied into the area where fairness and transparency are required such as public services and important business decisions. Thus, XAI has been attracting attention throughout the world and well-known universities and research institutions are engaged in its development, including an investment program announced by the U.S. Defense Advanced Research Projects Agency (DARPA) in August 2016.

One of the strategic domains in ISID's Medium-Term Management Plan launched in 2016 is to accelerate in creating new businesses using big data, AI, robotics and other advanced technologies. Within AI, we developed solutions resolving issues within data usage including "CALC", a large-scale data analysis service, and "Paxata", a data preparation platform. By adding simMachines, a cutting-edge XAI solution, into our solution offerings, we will accelerate the practical application of AI in a wide range of areas and realize the use of data resolving issues that customers and society is facing.

simMachines Overview and Features
simMachines serves customers across financial services, retail, e-commerce, media / telecom, agency, marketing platform providers and consulting industries. It provides XAI software applications for solving client challenges where explainability is essential for marketing, fraud / risk, compliance and anomaly detection applications. The simMachines' unique advantages are:

1. Highly versatile proprietary algorithm
  simMachines is packed with a proprietary algorithm developed by Arnoldo J. Muller-Molina, PhD., the founder of simMachines and a leading authority on Similarity Search[1]. simMachines enables the

high-speed and highly accurate analysis of massive data. In general, algorithms used for deep learning and Similarity Search have a ubiquitous problem, so-called the "Curse of Dimensionality", which makes it difficult to obtain sufficient learning results as the variables (dimensions) associated with data increase. Algorithm of simMachines is the first and only technology in the world solving this problem with unique computation, which is capable of handling thousands of variables in various data alaysis.

2. Dynamic and granular justification

simMachines' prediction algorithm uses similarity among neighbor data as an indicator to correlate prediction results with similar data record units and value ranges, which empowers dynamic and granular justification for each prediction. For example, it leads analysis to specific improvements and measures such as "it is inferred that data A of column X with value 0.4 correlates with the result C because it is in the range of 0.1–0.5. In other words, to avoid result C, measurement must be taken to make column X less than 0.1 or more than 0.5."

3. Non-programming XAI model development and easy to integrate it with businesses

simMachines is equipped with a function that generates non-programmed prediction models based on data inputs. Prediction models are generated and simultaneously turned into APIs that can be instantly incorporated into processes such as business systems and RPA.

ISID has already worked on a proof of concept (PoC) with numerous customers in a variety of industries, including factor analysis of specific event occurrences in manufacturing industry production processes and credit screening analysis at financial institutions. Going forward, we will strengthen the simMachines solution and contribute to the resolution of issues that customers and society is facing.

Profile of simMachines, Inc.

Company name	simMachines, Inc.
Location	222 W Merchandise Mart Plaza #1225, Chicago, IL 60654
Year of establishment	2012
Representative	Robert Zieserl
Website	https://simmachines.com

*[1] Similarity Search: general term for algorithms with the basis of searches for the degree of similarity between data.