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General labelled data generator framework for network machine learning

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Abstract— Artificial Intelligence (AI) technology has made remarkable achievements in various fields. Especially, deep learning technology that is the representative technology of AI, showed high accuracy in speech recognition, image recognition, pattern recognition, natural language processing and translation. In addition, there are many interesting research results such as art, literature and music that cannot be distinguished whether it was made by human or AI. In the field of networks, attempts to solve problems that have not been able to be solved or complex problems using AI have started to become a global trend. However, there is a lack of data sets to apply machine learning to the network and it is difficult to know network problem to solve. So far, there have been a lot of efforts to study network machine learning, but there are few studies to make a necessary dataset. In this paper, we introduce basic network machine learning technology and propose a method to easily generate data for network machine learning. Based on the data generation framework proposed in this paper, the results of automatic generation of labelled data and the results of learning and inferring from the corresponding dataset are also provided.

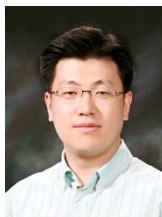
Keyword—machine learning, data generator, deep learning, network machine learning, supervised learning.



Kwihoon Kim studied in KAIST, M.S. degree and Ph.D. degree in 2000 and 2013, respectively. He worked in LG DACOM 2000~2005 and is a research engineer in ETRI since 2005. He is a principal research engineer of intelligent IoE networking research team, ETRI now. He is an editor and rapporteur of ITU-T SG11 since 2006. His interested fields are Fog/edge computing, Internet of Things, 5G/IMT2020, deep learning, machine learning, reinforcement learning, GAN and knowledge-converged intelligent service.



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