

## A Research on the Copyright Difficulties and Response of Machine Learning

Long Xu\* & Gung-Yeu Jeng\*\*

## Abstract

The development and application of artificial intelligence is a hot task in the high speed of the era of science and technology. Machine learning is the key to artificial intelligence, which is characterized by data training algorithms. It requires to collect, process and input large amounts of data for algorithm training. Therefore, extensive copying, reworking or editing of other people's work may inevitably be involved in the very beginning. However, the use of works by artificial intelligence would not necessarily exempt the limitation of the current copyright law, which makes enterprises need to apply for authorization and pay fees for a large number of works. It not only causes practical difficulties, but also seriously hinders the development of science and technology in the field of artificial intelligence. According to the present situation that the United States, Japan, the European Union and other countries or regions in the world have already provided legalized solutions for the problems above, it is necessary for Taiwan to formulate the special rules for the utilization of legalization in order to eliminate the copyright obstacles to the development of artificial intelligence and provide international competitive advantages. Consequently, this paper analyzed

E-mail: e4452@scu.edu.tw

<sup>\*</sup> Assistant Professor, Xiamen University of Technology, Ph.D., Soochow University, School of Law.

E-mail: xulong10530@gmail.com

<sup>\*\*</sup> Professor of Law, Soochow University, School of Law, Doctor of law, University of Göttingen.

the business model as well as proposing four kinds of coping styles such as the restriction of the copyright, the fair use, compulsory license system, and statute license system. In result, compared with the restriction of the copyright, fair use or compulsory license system, the statute license system is more conducive to reducing transaction costs, balancing the interests of all parties, protecting the interests of copyright owners, and providing a good environment for the application and development of artificial intelligence technology. Therefore, this paper argues that the statute license system should be applied to machine learning, and the specific applicable situation should be scientifically defined to improve the corresponding supporting measures.

Keywords: Artificial Intelligence, Machine Learning, Machine Reading, The Restriction of Copyright, Fair Use, Transformative Use, Compulsory License, Statute License