

中央研究院統計科學研究所 學術演講

講 題：Information content of Multi-Class Classification

演講人：Prof. Fushing Hsieh (謝復興 教授)

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時 間：2019年8月28日 (星期三) 上午10:30-12:00

地 點：中央研究院統計科學研究所6005會議室(環境變遷研究大樓A棟)

※茶 會：上午 10：10 開始

Abstract

In Multi-Class Classification (MCC), each label is attached with a possibly high dimensional and large sized point-cloud. I will start from nonparametrically building a label embedding tree, and then deriving a label predictive graph. Both label embedding tree and predictive graph reveals the nature of information content of (MCC): Heterogeneity. This is the platform for Data-driven Intelligence (D.I.). D.I. is shown to achieve nearly perfect, if not perfect, predictions. We then argue that achieving perfect prediction is indeed the prerequisite of all data analysis in general. Throughout our computational developments, data from PITCHf/x database is used. I will also mention how to scale our algorithmic paradigm in the setting of Extreme MCC involving with many hundreds or thousands of labels.

At the end, if time allows, I will mention issues related to Multi-Label Classification (MLC) and Multiple Response problem in order to shed some lights on the future competition between D.I and A.I. (Artificial Intelligence).

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