

POSTGRADUATE SEMINAR SERIES

Topic Defence Seminar

Topic Title : **Unsupervised Learning of Visual Deep Representation using Meta-learning-based Network Updating Strategy**

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Abstract : Representation learning has long been explored in the field of artificial intelligence. Visual representations, in particular, are considered one of the most difficult to learn due to their high dimensionality and the high-level semantics involved. Until recent years, with the extraordinary progress of deep learning technology, impressive breakthroughs have been made in this direction by using deep neural network encoders. However, the enormous demand for labeled data is always the most critical bottleneck for many deep learning methods and applications. Unsupervised learning can elegantly avoid this problem. But the majority of existing methods are not yet applicable to the unsupervised learning of visual representation. Metric-learning-based methods achieve promising results in unsupervised representation learning within these two years. Nevertheless, these methods suffer from the problems like large training scale, unstable performance, and high dependence on model initialization. Meta-learning is a new approach proposed in the field of transfer learning. Using the idea of "learn to learn", it has outstanding achievements in cross-tasks knowledge transfer. In this study, we refer to the above idea of meta-learning and try to cope with the above problems in the metric-learning-based unsupervised visual representation learning methods. We deem that initialization matters in this problem, and we intend to design a training strategy for dynamic updating of network parameters adopting the ideas of meta-learning. Ultimately, experiments will be conducted to compare our methods with the baselines and the current state-of-the-art methods.

Date : **20 May 2021, Thursday**

Time : **15:30 – 17:00**

Venue : **Zoom Meeting**  Meeting ID: 966 2630 9121 Passcode: 12345678

link: <https://lingnan.zoom.us/j/96626309121?pwd=YS9tY3NzRG1hZnNtS2R3b1U5dkNQdz09>

Language : **English**



*** All are Welcome ***