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SEMINAR

2024 SERIES

Mitigating Distribution Shifts in Using Pre-trained Vision-Language Models

DATE & TIME

5 DEC 2024 (THU) 12:00 – 1:00 PM

VENUE

DLB 637, 6/F, David C. Lam Building, Shaw Campus

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ABSTRACT

Benefiting from large-scale image-text pair dataset, powerful pre-trained vision-language models (VLMs, such as CLIP) enable many real-world applications, e.g., zero-shot classification and image/text retrieval. However, for many real-world applications, their datasets have different data distributions from the dataset used to train VLMs, might causing poor performance (based on machine learning theory) when we use these VLMs. To mitigate the negative effects brought from these shifts, we normally try to 1) fine-tune a pre-trained VLM with downstream tasks or 2) further improve the generalisation ability of a pre-trained VLM. In this talk, I will first introduce our recent work (one oral paper and one poster paper in ICML 2024) in both directions of 1) and 2). Then, I will introduce another work on how to detect label set shift when using pre-trained VLMs in zero-shot classification (one spotlight paper in ICLR 2024).

SPEAKER'S BIOGRAPHY

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