



Dr. Kaiyang Zhou

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 **Date: 20 March 2023 (Monday)**

 **Time: 2:30pm – 3:30pm**

 **Registration: <https://bit.ly/cs-ereg>**

(*Zoom details will only be provided to registrants)

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Open-world Visual Computing with Foundation Models: A Prompt Learning Perspective

ABSTRACT

Open-world visual recognition poses several challenges that hinder the widespread adoption of machine learning models. These include domain shifts that create a disparity between training and testing data distributions, limited data that provides only a few labeled examples for model tuning, and zero-shot learning that requires the model to utilize metadata (e.g., text) to predict new categories, among others. In this talk, I will present a series of studies aimed at addressing these challenges in open-world visual recognition using a unified architecture based on foundation models. These models are gigantic neural networks that are pre-trained on broad multimodal data and can be extremely difficult to fine-tune. Specifically, I will discuss how to adapt vision foundation models using simple prompt learning methods that involve modifying a small number of input space parameters rather than fine-tuning the entire model.

BIOGRAPHY

Dr. Kaiyang Zhou is currently a research fellow at NTU Singapore. His research interests lie at the intersection of machine learning and computer vision with specialisation in representation learning, domain generalisation and efficient deep learning. He has published more than 20 papers at top-tier journals and conferences in relevant fields, such as TPAMI, IJCV and CVPR, with over 2,700 citations (h-index: 15) received in total (as of Feb 2023). He is a guest editor of the flagship journal in computer vision, International Journal of Computer Vision (IJCV), and has served as an area chair and senior program committee member for BMVC 2022 and AAI 2023, respectively. He received his PhD in Computer Science from the University of Surrey, UK, in 2020.

ENQUIRY