Liang Zheng (Australian National University)

Data-centric AI at test time

Abstract

From a complementary perspective to model development, data-centric AI aims to improve and analyse data to better understand AI systems. While significant efforts have been made in understanding training data, this talk will introduce some attempts from my group analysing test data. Specifically, I will talk about how to evaluate the difficulty of the test data, or in other words, the model accuracy, in an unsupervised way, where some measurements of model responses are very useful to characterise model performance. Then, I will also introduce a new video format from which motions can be efficiently captured by existing action recognition networks. Finally, I will discuss a new way of prompting large language models, which is zero-shot, task-agnostic, and prompt-specific. I will conclude with perspectives of data-centric problems and AI workflows.

Bio

Dr Liang Zheng is an Associate Professor (tenured) in the Australian National University. He is best known for his contributions in object re-identification, where he published well-known algorithms such as random erasing data augmentation (AAAI 2020), part-based convolutional baseline (ECCV 2018), and joint detection and embedding (ECCV 2020). His recent research interest is data-centric AI and AI workflows in computer vision, natural language processing, software engineering, maths and so on. He is a co-organiser of the AI City workshop series at CVPR and vision datasets understanding workshop series at CVPR. He regularly serves as an Area Chair for CVPR, ICCV, ECCV, and NeurIPS, and a Program Co-Chair for ACM Multimedia 2024. He was named one of the AI's 10 to Watch by IEEE Intelligent Systems and Australian's Top 40 Early Achievers by The Australian. He received his B.S degree (2010) and Ph.D degree (2015) from Tsinghua University, China.