Title: Modelling of Micro Videos for Visual Analytics

Speaker: Prof Tat-Seng Chua

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Abstract:

Micro-video is a new form of user generated content favored by young users. Popular micro-videos have enormous commercial potential in many ways such as real-time event detection, marketing and recommendation. However, the analysis and modeling of micro-video is challenging because of its low-quality, short duration, and often lack of meaningful textual annotations. On the other hand, micro-video tends to focus on only one topic, and its audio track contains the ambient sound of the actual location. Hence the modeling of micro-videos must consider not just visual, but also noisy text, social network, and acoustic modalities. In this research, we focus on two sub-problems of micro-video analytics, namely venue category estimation and popularity prediction. To tackle both sub-problems and to handle the issues of data sparsity, we focus on jointly learning the optimal latent common space from multi-modalities for each sub-problem from which the popularity or venue category of micro-videos can be better identified. From the common latent spaces found, we then develop a tree-guided multi-task multi-modal learning model to estimate the venue category, and a novel transductive multi-modal learning method to predict the popularity of micro-videos. We validate the effectiveness of the models developed on a large-scale micro video dataset gathered from Vine. This talk presents our current research and future work towards leveraging micro-videos for better social media analytics.

Bio of Speaker:

Dr Chua is the KITHCT Chair Professor at the School of Computing, National University of Singapore. He was the Acting and Founding Dean of the School from 1998-2000. Dr Chua's main research interest is in multimedia information retrieval and social media analytics. In particular, his research focuses on the extraction, retrieval and question-answering (QA) of text and rich media arising from the Web and multiple social networks. He is the co-Director of NExT, a joint Center between NUS and Tsinghua University to develop technologies for live social media search.

Dr Chua is the 2015 winner of the prestigious ACM SIGMM award for Outstanding Technical Contributions to Multimedia Computing, Communications and Applications. He is the Chair of steering committee of ACM International Conference on Multimedia Retrieval (ICMR) and Multimedia Modeling (MMM) conference series. Dr Chua is also the General Co-Chair of ACM Multimedia 2005, ACM CIVR (now ACM ICMR) 2005, ACM SIGIR 2008, and ACM Web Science 2015. He serves in the editorial boards of four international journals. Dr. Chua is the co-Founder of two technology startup companies in Singapore. He holds a PhD from the University of Leeds, UK.