

Special Session 6: Machine Learning for Affective Computing of Large-scale Visual Content

With the rapid development of digital photography technology and wide-spread popularity of social networks, people have become used to sharing their lives and expressing their opinions using images and videos together with text, resulting in a large volume of visual content tagged with implicit collective behavior. To manage, retrieve and understand such gigantic visual collections poses significant technical and scientific challenges, and requires to understand how humans perceive cognitive concepts and affective semantics through visual input. Most of the existing works on visual content analysis focus on understanding the cognitive aspects by describing the actual content, e.g. what kind of objects or scenes are seen. Nowadays, there is a rising demand for emotion representation in artificial intelligence, and thus the analysis of visual content at the affective level is becoming increasingly urgent.

Affective computing of the large-scale visual content is rather challenging because it involves multidisciplinary understanding of human perception and behavior. The development is constrained mainly by the affective gap and the subjectivity of emotion perceptions. Recently, great advancements in machine learning and artificial intelligence have made large-scale affective computing of visual content a possibility, which received a lot of interest and attention from both academic and industrial research communities.

In this context, this special session seeks original contributions reporting the most recent progress on different machine learning methodologies for affective computing of large-scale visual content and its wide applications. It targets a mixed audience of researchers and product developers from several communities, i.e., multimedia, machine learning, psychology, computer vision, etc.

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