

International Journal of Computer Vision

Special Issue on Deep Learning for Face Analysis

Deep learning is one of the most important breakthroughs in the field of artificial intelligence over the last decade. It has achieved great success in speech recognition, natural language processing, computer vision, and multimedia. Many face analysis tasks, including face detection, alignment, reconstruction, and recognition, benefit from the powerful representation learning capability of deep learning techniques. Not only there has been a constantly growing flow of related research papers, but also substantial progress has been achieved in real-world applications such as security, video surveillance, and human-computer interaction.

While substantial progress has been achieved in face analysis with deep learning, many issues still remain and new problems emerge. For instance, the scalability of deep networks to large-scale unconstrained recognition needs be improved. In-the-wild facial attributes recognition with imbalance class distribution is still challenging. The accuracy and efficiency of detecting faces with a wide range of scales in a crowded scene still see a large room for improvement.

This special issue presents a great platform to make a definitive statement about the state of the art by providing a significant collective contribution to this emerging field of study. Specifically, we aim to solicit original contributions that: (1) present state-of-the-art theories related to deep learning for face analysis; (2) develop novel methods and applications; (3) survey the recent progress in this area; and (4) establish benchmark datasets.

Topics of Interest

The list of possible topics includes, but is not limited to:

- Theory
 - Deep learning
 - Cross-domain feature learning and fusion
 - Transfer learning
 - Multitask learning
 - Generative adversarial learning
 - Multi-instance learning
 - Weakly supervised learning
 - Reinforcement learning
 - Zero-shot / One-shot learning
- Applications
 - Face detection
 - Face alignment and tracking
 - Face recognition
 - Face verification
 - Face clustering
 - Face attribute recognition (including age and gender)
 - Facial expression recognition
 - Face hallucination and completion
 - 3D face reconstruction
 - Face parsing
 - Face sketch synthesis and recognition

Submission

Authors are encouraged to submit original work that has not appeared in, nor is in consideration by, other journals. Previously published conference papers can be submitted in extended form (with additional supporting experiments and a more detailed technical description of the method). Manuscripts will be subject to a peer reviewing process and must conform to the authors guidelines available on the IJCV website at:

<http://www.springer.com/computer/image+processing/journal/11263>

(link "Instructions for Authors" on the right panel).

Manuscripts can be submitted to:

<http://visi.edmgr.com>

by selecting "S.I.: Deep Learning for Face Analysis" in the section "Choose Article Type".

Important Dates

Full paper submission deadline	15 Jan 2018
First review decision	15 Apr 2018
Revised paper due	30 Jun 2018
Final review decision	01 Aug 2018
Final manuscript submission	01 Sept 2018
Online Publication	Oct 2018

More and updated information can be found on http://www.ie.cuhk.edu.hk/~ccloy/ijcv_si

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