

Learning toward Visual Recognition in the Wild

For any question please email learningtovr2019@gmail.com

Visual Recognition, as a key research field in artificial intelligence, has enabled rapid progress over the past years. Learning methodologies from various perspectives have achieved remarkable performance in tasks including image recognition, image generation, visual question-answering, visual navigation, video analytics, robotics, etc. Despite these successes, visual recognition still faces many challenges. Humans can learn new concepts with very little supervision while the most powerful deep learning techniques might fail. This motivates the machine learning direction of zero-/few-shot learning as well as meta-learning. Besides, other obstacles such as generalization problem caused by learning with multiple domains are deserved to be investigated. It is fairly difficult to build feature representations that are transferrable between source domains and target domain. It gives rise to explorations on efficient data usages and training procedures during modeling. In addition, visual recognition often inevitably involves modeling highly structured data such as natural languages, videos, and semantic graphs. How can systems be designed and deployed for large-scale representation learning with various data structures is also a prosperous research area. These challenges include neural network architecture designing, tractable algorithms for learning, theoretical bound optimizing, and more.

This is a satellite special session of the 10th International Conference on Image and Graphics (ICIG). The special session aims to bring together researchers from both academia and industry interested in addressing various aspects of learning towards visual recognition.

Relevant topics to this special session include but are not limited to:

- Learning with image, video, graph, text, and other structured modalities
- Learning to address low-resource scenarios
- Meta-learning
- Zero-shot learning / Few-shot learning
- Deep generative modeling
- Deep reinforcement learning / Imitation learning
- Domain adaptation
- Transfer learning / Multi-task learning
- Unsupervised representation learning
- Scalable algorithms to accelerate learning

More details are available at <https://learning-to-vr.github.io/>

Session Chairs

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