

Call for Papers IEEE Transactions on Pattern Analysis and Machine Intelligence

Special Issue on Learning with Shared Information for Computer Vision and Multimedia Analysis

In the real world, a realistic setting for computer vision or multimedia recognition problems is that we have some classes containing lots of training data and many classes contain a small amount of training data. Therefore, how to use frequent classes to help learning rare classes for which it is harder to collect the training data is an open question. Learning with Shared Information is an emerging topic in machine learning, computer vision and multimedia analysis. There are different level of components that can be shared during concept modeling and machine learning stages, such as sharing generic object parts, sharing attributes, sharing transformations, sharing regularization parameters and sharing training examples, etc. Regarding the specific methods, multi-task learning, transfer learning and deep learning can be seen as using different strategies to share information. These learning with shared information methods are very effective in solving real-world large-scale problems. This special issue aims at gathering the recent advances in learning with shared information methods and their applications in computer vision and multimedia analysis. Both state-of-the-art works, as well as literature reviews, are welcome for submission. Papers addressing interesting real-world computer vision and multimedia applications are especially encouraged. Topics of interest include, but are not limited to:

- Multi-task learning or transfer learning for large-scale computer vision and multimedia analysis
- Deep learning for large-scale computer vision and multimedia analysis
- Multi-modal approach for large-scale computer vision and multimedia analysis
- Different sharing strategies, e.g., sharing generic object parts, sharing attributes, sharing transformations, sharing regularization parameters and sharing training examples,
- Real-world computer vision and multimedia applications based on learning with shared information, e.g., event detection, object recognition, object detection, action recognition, human head pose estimation, object tracking, location-based services, semantic indexing.
- New datasets and metrics to evaluate the benefit of the proposed sharing ability for the specific computer vision or multimedia problem.
- Survey papers regarding the topic of learning with shared information.

Authors who are unsure whether their planned submission is in scope may contact the guest editors prior to the submission deadline with an abstract, in order to receive feedback.

Important Dates:

- Paper Submission: February 1, 2016
- First Notification: May 1, 2016
- Revised Manuscript: July 1, 2016
- Notification of Acceptance: August 1, 2016
- Final Manuscript Due: September 1, 2016

Guest Editors:

Prof. Trevor Darell, University of California, Berkeley, USA

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