Cross-label Suppression: A Discriminative and Fast Dictionary Learning with Group Regularization

ABSTRACT

- A compact and discriminative dictionary efficiently.Given a structured dictionary with each atom (columns in the dictionary matrix) related to some label, cross-label suppression constraint to enlarge the difference among representations for different classes.
- A group regularization to enforce representations to preserve label properties of original samples, meaning the representations for the same class are encouraged to be similar
- The cross-label suppression, we don’t resort to frequently-used `0-norm or `1-norm for coding, and obtain computational efficiency without losing the discriminative power for categorization.

EXISTING SYSTEM

- The past few decades and has been widely adopted in a variety of applications, including image processing, clustering.
- The approach is built on the belief that a broad variety of signals such as images, video,and audio can be well represented by a linear combination of a few elements from a set of representative patterns, where the whole set of representative patterns is called dictionary and its each element is called atom.

PROPOSED SYSTEM

- Extensive experiments on six data sets including face recognition, object categorization, scene classification, texture recognition and sport action categorization are conducted, and the results show that the proposed approach can outperform lots of recently presented dictionary algorithms on both recognition accuracy and computational efficiency.

HARDWARE REQUIREMENTS

- Processor - Intel
- Speed - 1.1 Ghz
- RAM - 256 MB(min)
- Hard Disk - 20 GB
- Monitor - SVGA

SOFTWARE REQUIREMENTS

- Tool - MATLAB R2012
- Operating system - Windows Xp, 7

REFERENCES

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