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Entropy and Orthogonality Based Deep Discriminative Feature Learning for Object Recognition

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Highlights

- We propose a novel discriminative feature learning method of CNNs by enforcing the learned feature vectors to have class-selectivity.
- We propose the entropy-orthogonality loss (EOL) to explicitly enforce that each dimension of the feature vectors only responds strongly to as few classes as possible, and the feature vectors from different classes are as orthogonal as possible.
- We provide the optimization algorithm based on mini-batch for the proposed framework.
- Comprehensive experimental evaluations with both the image classification and face verification tasks demonstrate the effectiveness of the proposed method.

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