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	abstract	During the forward pass of Deep Neural Networks (DNNs), inputs gradually transformed from low-level features to high-level conceptual labels. While features at different layers could summarize the important factors of the inputs at varying levels, modern out-of-distribution (OOD) detection methods mostly focus on utilizing their ending layer features. In this paper, we proposed a novel layer-adaptive OOD detection framework (LA-OOD) for DNNs that can fully utilize the intermediate layers' outputs. Specifically, instead of training a unified OOD detector at a fixed ending layer, we train multiple One-Class SVM OOD detectors simultaneously at the intermediate layers to exploit the full spectrum characteristics encoded at varying depths of DNNs. We develop a simple yet effective layer-adaptive policy to identify the best layer for detecting each potential OOD example. LA-OOD can be applied to any existing DNNs and does not require access to OOD samples during the training. Using three DNNs of varying depth and architectures, our experiments demonstrate that LA-OOD is robust against OODs of varying complexity and can outperform state-of-the-art competitors by a large margin on some real-world datasets.	**abstract**			
	versions		**versions**			