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	authors	 Vahdat Abdelzad Krzysztof Czarnecki Rick Salay Taylor Denounden Sachin Vernekar Buu Phan 	authors	Vahdat Abdelzad Krzysztof Czarnecki Rick Salay Taylor Denounden, Sachin Vernekar Buu Phan		
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	urls	https://openalex.org/W2981902149	abstract	Deep neural networks achieve superior performance in challenging tasks such as image classification. However, deep classifiers tend to incorrectly classify out-of-distribution (OOD) inputs, which are inputs that do not belong to the classifier training distribution. Several approaches have been proposed to detect OOD inputs, but the detection task is still an ongoing challenge. In this paper, we propose a new OOD detection approach that can be easily applied to an existing classifier and does not need to		
	id	id5296417443194005034		have access to OOD samples. The detector is a one-class classifier trained on the output of an early layer of the original classifier fed with its original training set. We apply our approach to several low- and high-dimensional datasets and compare it to the state-of-the-art detection approaches. Our approach achieves substantially better results over multiple metrics.		
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