cases	doc_1	doc_2	decision	id
		authors: • Shin Kamada • Takumi Ichimura title: An Object Detection by using Adaptive Structural Learning of Deep Belief Network publication_date: 2019-09-30 05:49:02+00:00 source: SupportedSources.ARXIV journal: None volume: doi: urls: • http://arxiv.org/pdf/1909.13465v1 • http://arxiv.org/abs/1909.13465v1 • http://arxiv.org/pdf/1909.13465v1 id: id-5518709614437186411 abstract: Deep learning forms a hierarchical network structure for representation of multiple input features. The adaptive structural learning method of Deep Belief Network (DBN) can realize a high classification capability while searching the optimal network structure during the training. The method can find the optimal number of hidden neurons for given input data in a Restricted Boltzmann Machine (RBM) by neuron generation-annihilation algorithm. Moreover, it can generate a new hidden layer in DBN by the layer generation algorithm to actualize a deep data representation. The proposed method showed higher classification accuracy for image benchmark data sets than several deep learning methods including well-known CNN methods. In this paper, a new object detection method for the DBN architecture is proposed for localization and category of objects. The method is a task for finding semantic objects in images as Bounding Box (B-Box). To investigate the effectiveness of the proposed method, the adaptive structural learning of DBN and the object detection were evaluated on the Chest X-ray image benchmark data set (CXR8), which is one of the most commonly accessible radiological examination for many lung diseases. The proposed method showed higher performance for both classification (more than 94.5% classification for test data) and localization (more than 90.4% detection for test data) than the other CNN methods. versions:	DUPLICATES	148
	authors: • Kamada, S. • Ichimura, T. title: An Object Detection by using Adaptive Structural Learning of Deep Belief Network publication_date: 2019-01-01 00:00:00 source: SupportedSources.CROSSREF journal: volume: doi: 10.1109/ijcnn.2019.8852145 urls: • http://xplorestaging.ieee.org/ielx7/8840768/8851681/08852145.pdf?arnumber=8852145 • http://dx.doi.org/10.1109/ijcnn.2019.8852145 id: id-5742767139521203869 abstract: versions:			