	doc_1	doc_2	decision	id
cases			DUPLICATES	182

doc_1	
authors	• Zhaowei Cai • Quanfu Fan • R. Feris • N. Vasconcelos
title	A Unified Multi-scale Deep Convolutional Neural Network for Fast Object Detection
publication_date	2016-07-25 00:00:00
source	SupportedSources.SEMANTIC_SCHOLAR
journal	ArXiv
volume	abs/1607.07155
doi	10.1007/978-3-319-46493-0_22
urls	• https://www.semanticscholar.org/paper/d6473533e89e5f946a6ff3ad07c6a74ee9b47672
id	id-7072501341638312075
abstract	None
versions	

doc_2	
authors	• Zhaowei Cai • Quanfu Fan • Rogerio S. Feris • Nuno Vasconcelos
title	A Unified Multi-scale Deep Convolutional Neural Network for Fast Object Detection
publication_date	2016-07-25 05:15:31+00:00
source	SupportedSources.ARXIV
journal	None
volume	
doi	
urls	• http://arxiv.org/pdf/1607.07155v1 • http://arxiv.org/abs/1607.07155v1 • http://arxiv.org/pdf/1607.07155v1
id	id-5089426745586918818
abstract	A unified deep neural network, denoted the multi-scale CNN (MS-CNN), is proposed for fast multi-scale object detection. The MS-CNN consists of a proposal sub-network and a detection sub-network. In the proposal sub-network, detection is performed at multiple output layers, so that receptive fields match objects of different scales. These complementary scale-specific detectors are combined to produce a strong multi-scale object detector. The unified network is learned end-to-end, by optimizing a multi-task loss. Feature upsampling by deconvolution is also explored, as an alternative to input upsampling, to reduce the memory and computation costs. State-of-the-art object detection performance, at up to 15 fps, is reported on datasets, such as KITTI and Caltech, containing a substantial number of small objects.
versions	