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TITLE OF INVENTION	ICDN- OBJECT DETECTION SYSTEM: INTELLIGENT OBJECT DETECTION SYSTEM WITH IMAGE CLASSIFICATION AND DEEP NEURAL NETWORKS.		
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(57) Abstract :

ABSTRACT Our Invention ICDN- Object Detection System is a system and apparatus, including computer programs encoded on computer storage media for detecting objects in images. The ICDN- object detection system is one of the methods includes receiving an input image and a full object mask is generated by providing the input image to a first deep neural network object detector that produces a full object mask for an object of a particular object type depicted in the input image. The ICDN- object detector that produces a partial object mask is generated by providing the input image to a second-deep neural network object detector that produces a partial object mask for a portion of the object of the particular object type depicted in the input image. The ICDN- object detection system a bounding box is determined for the object in the image using the full object mask and the partial object mask and computer-readable media for providing fast and accurate object detection and classification in images are described herein. For examples: a computing device can receive an input image and the computing device can process the image and generate a convolutional feature map. In some configurations, the convolutional feature map can be processed through a Region Proposal Network to generate proposals for candidate objects in the image. Other examples: The computing device can process the convolutional feature map with the proposals through a Fast Region-Based Convolutional Neural Network proposal classifier to determine a class of each object in the image and a confidence score associated therewith and also the computing device can then provide a requestor with an output including the object classification and/or confidence score.

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