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Live Object Detection Using Tensor Flow in Deep Learning

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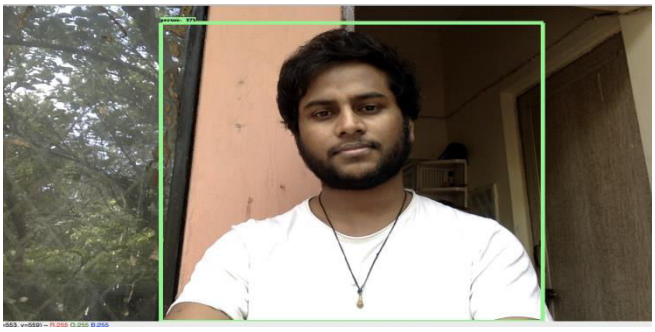
Abstract-There's no shortage of interesting problems in computer vision, from simple image classificati**on** to 3D-pose estimation. One of the problems we're most interested in and have worked on a bunch is object detection. Like many other computer vision problems, there still isn't an obvious or even "best" way to approach object detection problems, meaning there's still much room for improvement. In this paper we solved it.is common problems in object detection, go into the details of practical applications and understand how the way to tackle it has been shifting in the last years with deep. In this we solved object detection and its classification into different categories that is segmentation of objects.

***Key Words*:** Deep Learning, Python, Tensor Flow , Python

1. INTRODUCTION-Computer vision is an



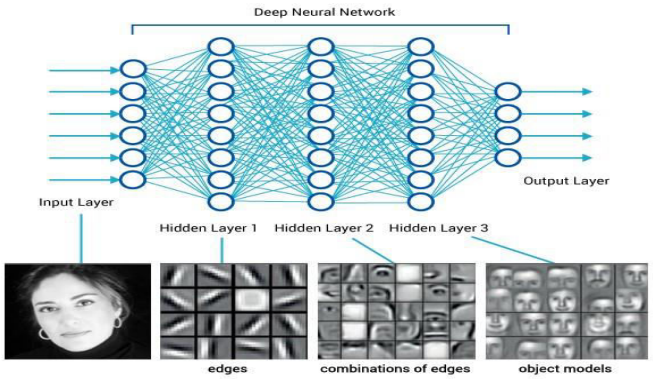
interdisciplinary field that has been gaining huge amount of traction in the recent years. Object detection is a basic part of computer vision used for vehicle detection, person detection, surveillance etc. Thanks to deep learning! Every year, new algorithms/ models keep on outperforming the previous ones. The main challenges in front of us for more accuracy are more clear images of the user. For more accuracy we have to improve the camera quality. Which can take clear images with good resolution and density of images and background colors.Using the appropriate algorithm which is fit for the system.

1.1 Tensor Flow

TensorFlow is a framework created by Google for creating Deep Learning models. Deep Learning is a category of machine learning models (algorithms) that use multi-layer neural networks. Machine Learning has enabled us to build complex applications with great accuracy. Whether it has to do with images, videos, text or even audio, Machine Learning can solve problems from a wide range. Tensor flow can be used to achieve all of these applications. The reason for its popularity is the ease with which developers can build and deploy applications.

1.2 Deep Learning

Deep learning is a machine learning technique that teaches computers to do what comes naturally to humans: learn by example. Deep learning is a key technology behind driverless cars, enabling them to recognize a stop sign, or to distinguish a pedestrian from a lamppost. It is the key to voice control in consumer devices like phones, tablets, TVs, and hands-free speakers. Deep learning is getting lots of attention lately and for good reason. It's achieving results that were not



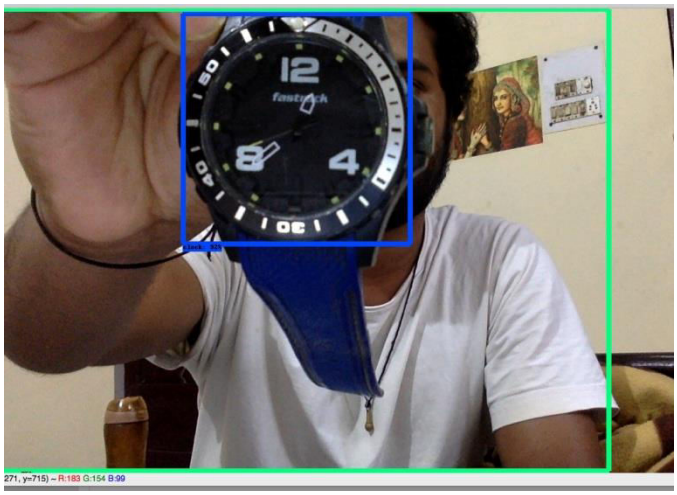


Fig: Detecting Clock

possible before.In deep learning, a computer model learns to perform classification tasks directly from images, text, or sound. Deep learning models can achieve state-of-the-art accuracy, sometimes exceeding human-level performance. Models are trained by using a large set of labeled data and neural network architectures that contain many layers.

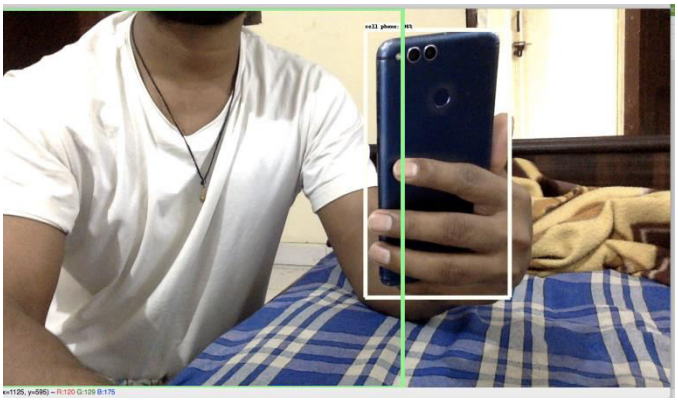


Fig-4 detecting cellphone

2. EXISTING PROBLEM

Object Detection is the process of finding real-world object instances like car, bike, in TV, flowers, and humans still imag or Videos. It allows for the recognition, localization, and detection of multiple objects within an image which provides us with a much better understanding of an image as a whole. It is commonly used in applications such as image retrieval, security, surveillance, and advanced driver assistance systems (ADAS)

4. Conclusion and Future Scope

This paper is object detection recognition System. By doing object detection, we can detect any types of objects in real life and this solve a lot of problems of human being and most common problems are develop face recognition, self driving car, sentiment analysis of human beings, in medicals field etc.Below are key point by which we can increase the accuracy and we have to use.we can change architecture of networks, like number of parameters, number of hidden 2layers, performing different types of convolution, applying different activation function.

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