**RV College of Engineering®**

**Department of M.C.A**

**Seminar Synopsis (20MCA42)**

**OpenCV for Image Processing Applications**

Computer Vision is the branch of the science of computers and software systems which can recognize as well as understand images and scenes. Computer Vision consists of various aspects such as image recognition, object detection, image generation, image super-resolution and many more. Object detection is widely used for face detection, vehicle detection, pedestrian counting, web images, security systems and self-driving cars

The highly accurate object detection-algorithms and methods such as R-CNN, Fast-RCNN, Faster-RCNN, Retina Net and fast yet highly accurate ones like SSD and YOLO. Using these methods and algorithms, based on deep learning which is also based on machine learning requires lots of mathematical and deep learning frameworks understanding by using dependencies such as TensorFlow, OpenCV, image etc, objects can be detected and annotated by a rectangular box. This also includes the accuracy of each method for identifying objects.

The outcome is aim of image processing is to help the computer to understand the content of an image. OpenCV is a library of programming functions mainly used for image processing. It provides a de-facto standard API for computer vision applications. Many real time problems can be solved using image processing applications. In the sample real time image processing applications of OpenCV are discussed along with steps. There are various applications of object detection that have been well researched with the help of OpenCV including face detection, character recognition, and vehicle calculator.

**LAXMIKANTH(1RV20MC036)** **GUIDE**

**Dr. B.H.Chandrashekar**

**Associate Professor**

**R.V.Collage Of Engineering**