In area. it is applicable for finding

Inthe field of computer vision object recognition is used for finding anddetecting objects from images or video. Object detection has many applicationssuch as image retrieval, video surveillance etc. Automatedsurveillance systems typically use stationary sensors or cameras such as cameratrap network to monitor surroundings of interest.

Camera traps are stationarycamera attached to the trees in the area. A camera trap is aremotely activated camera thatis furnished with a motion sensor or an infrared sensor, or uses alight beam as a trigger. From thiscamera, take pictures of wild animals on film without the presence ofresearches. For ecological researches it helps in hunting and wildlife viewing, beyond that there are several research applications such as studies ofnest ecology, identification of rarespecies, population size evaluation and species richness, as well as researchon habitat use and occupation of human-built structures. Camera trapsare useful in computing the number of diverse species in an area. It isapplicable for finding the behavioraland activity nature of animals, for example examine the day which they visitetc.

And also useful to evaluate migrations of animals. Camera traps candocument animal presence, abundance, population variation, especially in thesituation such as deforestation and habitat destruction. Using these cameratrap networks for monitoring of wildlife allow us to gather data at large scale. Fordetecting moving objects from the video use statistical background modelingtechniques. The detection of object from video become more complex due to thenon-stationary background. Examples of “ non-stationary” background motionabound in the real world, including periodic

motions, such as a ceiling fans, pendulums, or escalators, and dynamic textures, such as fountains, swayingtrees, or ocean ripples.

Formany years, animal detection from wildlife image or video is great field ofinterest among researches. It helps the biologist to learn the behavior ofanimals and also predict the actions of animals. Detection of animals haveseveral applications in real world life.

In now a days road accidents areincreasing day by day. One of the reasons for this is collision of animals withthe vehicle. Automatic animal detection system finding animals on highways. Sothat can take necessary action to prevent such collision.

Animaldetection method are useful to known locomotive characteristics of targetanimal and also prevent dangerous animal attacks in residential area . Lightningand chrominance problem can affect the detection of presented animal intrusion. In agricultural field the detection and segmentation of wild life reducewildlife mortality. The animal detection prevents intruders from entering intoresidential area. Also this detection system can be used for animal tracefacility, identification, antitheft, security of animals in zoo.

Manualdetection of animal becomes more tedious and time consuming because the datasetis very large. With the help of computer assisted animal classification system, can reduce time and make it more efficient. Wild life images collected from thefield appears in different pose, complex background, different lighting andclimate conditions, different view point and occlusion, make it as achallenging task.

And also animals of different classes appears as similar. Soan efficient algorithm is needed to solve these challenges. Animalclassification has three main stages i. e., segmentation, feature extraction andclassification.

The goal of segmentation is object identification for thatdivide the images into components. In addition to the object of interest itcontains some part of the image. Segmentation is carried out to get object ofinterest and discard other portion or background. In the case of wild lifeimages animals are often encircled by trees, leaves, shadows from thebackground.

So here segmentation is conducted to get the animal portion it isthe only region of interest. Afterthe segmentation of animal from image the next step is feature extraction. Infeature extraction extract the different properties which can be used forclassification purpose. Some animals possess high distinctive shapes, some havedistinctive color, some have distinctive texture patterns, and some arecharacterized by a combination of these properties. After feature extractionthe next step is selecting a suitable classifier for taking decision. Detectionand segmentation of moving objects from background is an important step forefficient video analysis. There are lot of methods and algorithms have beendeveloped for background subtraction and moving object detection. But accurateand reliable object detection from highly cluttered natural scenes becomechallenging task.

Animal detection from wildlife video scenes are often highlycluttered and dynamic with swaying trees, rippling water, moving shadows, sunspots, rain, etc. The problem is to develop effective model that capturecomplex background and texture dynamics. Existing methods faces issues such aslow

detection rate and false positive rate due to the dynamic and complexbackground as well as low contrast between foreground and cluttered background.

Toaddress this issue propose an efficient animal background detection methodwhich joins object proposal using local image segmentation with global imageverification. The proposed method has mainly two parts. They are1) Objectproposal using IEC 2) Cross–frame patch-level object verification. In thisfirst part generate set of regions that contain animal objects. This can beachieved by analyzing local image features which operates on pixel or smallblock level.

Therefore it has low computational complexity. There is apossibility that the proposed region might belongs to the background and alsothat region contain some patches from background in addition to the animal. Forensuring the region only contains animals and reducing false positive rate usesecond component. In the image verification, global comparison betweenforeground regions and background patches across multiple frames is performed. Itextracts global image features from the entire image patches, and create averification model that determine the similarity to the background image patches.