**MINI PROJECT**

**(2020-2021)**

**Smart Video Surveillance System**

**SYNOPSIS**

**Department of Computer Science and its application**



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**CONTENTS**

1. The Problem Statement
2. Reason for selecting the topic
3. Objective of the project
4. Literature Survey/Feasibility study
5. Hardware and Software to be used
6. Testing technologies to be used
7. Contribution the project makes and where
8. Scope for extension into a major project

**The Problem Statement:**  With increasing population the crime rates are also increasing and to check that what had happen at the crime scene CCTV (Closed Circuit Television) plays a vital role but it has limitation of only recording what is happening, it the responsibility of human beings to identify what is really happening.

So, in order to lesser the burden of our we provide CCTVs itself, the ability to recognise the human activities performed by us and give us what a person is really doing.

**Reason for selecting the topic:** The unique concept of reading an image/video, analysing it and giving out what it presents in it all this doing itself by a machine is the main reason for selecting this topic.

**Objective of the project:** To construct a system which takes video as an input to read and analyse and provide us the activity performed by a human being in it in the English language as output.

**Literature Survey/Feasibility study:** Study of how the OpenCV works and to control it using python language thus, to get required output. Also inserting the kinetics human activity data set in the OpenCV.

The work and use of OpenCV, data sets, python, webcam, display screen and all their co-relation with each other.

**Hardware and Software to be used:** A ***webcam*** of computer/laptop system to be used in category of Hardware and ***OpenCV*** is to be used in category of software along with use of ***python language*** and ***Kinetics 400 human activity data set*** in order to obtain the required result.

**Testing technologies to be used:** To test ***OpenCV*** itself provides us the platform to test our project effectively.

**Contribution the project makes and where:** Project makes contribution in the field of ***AI*** and ***deep learning***. In real world, it makes huge contribution in the field of conducting ***clean and fair online examination*** which is one of the big problems for schools as well as colleges, universities even governments. It also makes contribution in letting human being to know the ***unusual activity going on by identifying it***  before any mishap or offense take place.

**Scope for extension into a major project:** It has a huge scope for extension if we can connect the human activity data sets along with OpenCV code with CCTVs of public places like parks, malls, bus stops , railway stations ,etc, that will monitor on the activities performed by human beings and inform the supervisor of any unusual activity taking place.

**Conclusion:** We successfully implemented the human recognition system using OpenCV.