Project Summary

In our project we will work in the field of computer vision where the main subjects will be identifying objects and detect objects.

Also we will make use of principles from the world of image processing.

The goal of our project is to identify in real time an object that changes his location in relation to space, and in the same time identify and create a copy of changes that occurred in the boundaries of the object and in relation to the object.

The project will be applied in a computer application that accepts a A4 page and the drawing will be performed on the page.

Through the use of algorithms and different approaches that include image processing, identifying object and identifying the object movement , the application will start by identifying the page and set the angels of the camera, after that for every frame the app will identify the frame that can change his location and meanwhile the app will identify and recreate the lines that are created on the page in a way

that every copy of the line will appear in his original exact size , shape and dimensions with respect to the page.

The output of the app will be an image in a TIFF format that include a copy of the drawing.

We are facing many challenges sach as clearing noises , ignoring irrelevant data like the drawing hand , shade and so forth.

This application will be a cheap and effective solution to animation creators,

in general the app can be used for people that desire to simply draw or write on a page and then to pass their creation to the computer for extra editing without the background, for this reason the output file will be in TIFF format.

All that required from the user is a computer , web camera , standard A4 page and a pen instead of buying special electronic pen , tablets and scanners that costs to much.

The results of the project , the approach and the algorithms that we used indicate that we can apply this approach in a variety of fields.

The core of the project is analyzing movement with respect to a moving object,

for example , given a high resolution camera and in the right filming angel we can track after changes taking place in a phone screen even if the phone is moving.