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**CONCLUSION**

The project has been proved to be quite efficient at the basic situation. Comparatively it can be noted that the accuracies of computer vision techniques are higher than the deep learning methods. The main reason for this lack of sufficient data, it can be stated that the deep learning methods would eventually outrun the computer vision methods with more data. The system if enhanced to work on computer vision and use machine learning to compare results with deep learning methods and tweak the parameters, while providing the input data with labels, there would be a significant improvement and both the techniques would be practical.

These methods do not use any expensive hardware(sensors, camera) to estimate anything and hence has proved to be efficient and economic.

**FUTURE SCOPE**

This project has been currently restricted to fruit extraction (apples in specific) without checking the health of the fruit. With the help of long IR cameras and UV sensors, the heat map of the fruit can be obtained and the health and ripeness of the fruit can also be deciphered.

Under the computer vision techniques, more internal parameters can be used to obtain invariable parameters for better recognition. Other techniques like Hough Transforms, Moments and dynamic HSV and focal-length thresholding can be used.

Under the deep learning aspect, …(fill this up)

The drone control methods can also be refined by using a stereo camera or ultrasonic sensors for more precise distance estimation. The fruit/stalk if hidden in foliage can be extracted by using 3D angular computer vision techniques by stitching multiple angle frames obtained by moving the drone around the fruit at a pivoted circular motion. The stalk, presently only estimated by obtaining extreme points on the elliptical boundaries axis, can also be recognized to form a cylindrical shape using this technique.