

MULTIPURPOSE COCONUT CLIMBER ROBOT

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Project report submitted by

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ABSTRACT

Coconut trees can be found almost everywhere, it may be an agriculture farm or around the home. Especially in coastal regions the trees are found in larger number than the other region. And coconut is one among the major commercial crops in the region, it is known as 'Kalpa Vruksha' in Sanskrit, which means the trees which gives everything. Because it has various uses like coconut oil, preparing food item, soft drink, it is extensively used in the holy rituals of temple.

At Present, a labour has to climb the tree, cut all the coconuts and get down from it. But there is problem of skilled labours to climb the trees and also cost of labour is turning expensive, which makes a way to think of some alternate solution for the problem.

After studying the situation, we have planned to automate the work, so as to reduce majority of the problems. The aim of the project is to design and fabricate a **"Multipurpose Coconut Climber Robot"**, which can be used to climb the coconut tree and cut the coconut, so as to reduce the human effort in climbing tree and cutting the coconuts. The setup consists of the pulley driven rotary gripper mechanism to climb the tree with an arm mechanism to pluck the coconut. The source of power for the robot is an A.C current, the mechanism has to be operated manually using control unit.

There are several other mechanisms also available nowadays for climbing the coconut tree, but they are not fully automated. For coconut tree climbing and cutting purpose there are hardly any devices available. So our design is an outcome of complete study of the current problems, existing mechanisms and available resources. This robot will completely eliminate the human interference in climbing and cutting the coconut tree.