VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF ARECANUT TREE CLIMBING ROBOT"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING

IN

ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

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(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled **"Design and Implementation of Arecanut Tree Climbing Robot"** *is a bona fide work carried out by*

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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	Signature of the H.O. D	Signature of the Principal
Mrs. Nishma	Dr. D.V.Manjunatha	Dr. Peter Fernandes

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ABSTRACT

The people in rural areas of south India like Karnataka and Kerala mainly depend on agriculture for their livelihood. The main crops grown are Areca nut and coconut. For spraying and applying insecticides on the crown and also for harvesting, skilled laborer's have to climb manually up the tree. Such a process looks easy, in reality it is a laborious and dangerous task. Arecanut trees attain a height of about 60-70 feet.

It is mandatory to climb the trees a minimum of five times a year for a successful harvest - twice for the preventive spray against fungal disease, and thrice to harvest the arecanut. Only skilled labors can carry out these farming operations. They have to climb the trees using muscle power. In an acre that has 550 trees, a laborer has to climb a minimum of 100 to 150 trees. As this involves really hard, physical exertion, younger generations of laborer's are losing interest, with potentially harsh implications for arecanut cultivation. The spraying is done in monsoon, while harvest time is typically in summer. It requires skill to climb an arecanut tree. Skilled areca nut tree climbers have become scarce and farmers are finding it difficult to spray the insecticides. This project aims to overcome these deficiencies by developing a smart multitalented robot for arecanut farming.