ARECANUT SORTING USING IMAGE PROCESSING

MINI PROJECT REPORT

Submitted to

ALVA'S
Education Foundation®

DEPARTMENT OF MECHANICAL ENGINEERING, AIET

Affiliated to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Karnataka State, INDIA-590018

In partial fulfilment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING
in
MECHANICAL ENGINEERING

Submitted by:

MELWIN VINAY SERA 4AL21ME006

MOHAMMED SWALIH 4AL21ME007

Under the Guidance of

Prof. SHRATHCHANDRA PRABHU
Sr.asst,Professor

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
Shobhavana Campus, Mijar-574 225, Moodbidri, Dakshina Kannada.
Affiliated to VTU-Belagavi, Approved by AICTE, Accredited by NBA (ECE & CSE) and NAAC • A+

Academic Year: (2023-24)

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mijar, Moodbidri D.K -574225 – Karnataka

DEPARTMENT OF MECHANICAL ENGINEERING

ALVA'S
Education Foundation®

CERTIFICATE

Certified that the project work entitled **ARECANUT SORTING USING IMAGE PROCESSING** is a bona fide work carried by **MELIWN VINAY SERA (4AL21ME006) and MOHAMMED SWALIH (4AL21ME007)** are bon fide student of Mechanical Engineering **Alva's Institute of Engineering and Technology** in partial fulfilment for the award of **BACHELOR OF ENGINEERING** in **MECHANICAL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–2024. 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.

Prof. SHARATHCHANDRA PRABHU
Mini project Guide

DR. SATYANARAYANA
Head of the Department

Dept. Of Mechanical Engineering
Alva's Institute of Engineering & Technology
Mijar, MOODBIDRI - 574 225

ABSTRACT

This research presents a novel approach for sorting arecanuts using image processing techniques. The proposed system eliminates the need for manual sorting and conveyor belts, making it a more efficient and cost-effective solution. By capturing images of arecanuts, the system employs Python and OpenCV libraries to analyze and classify them based on their physical characteristics, such as size, shape, and color. A manually curated database of arecanut images is used to train the image processing model, ensuring accurate classification. The system's ability to differentiate between various grades of arecanuts allows for efficient sorting and grading, ultimately improving the quality and value of the final product.