	Pimpri Chinchwad Education Trust's **Pimpri Chinchwad College of Engineering & Research, Ravet, Pune** **Department of Electronics and Telecommunication**	
A Y: 2023 -24	**Project Summary Report**	**Group No: 01**

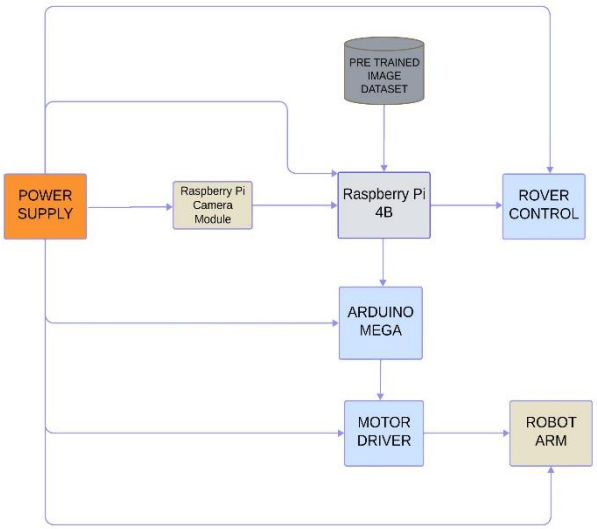
Project Summary	
Project Title	**COMPUTER VISION BASED COTTON HARVESTING ROVER**
Student Names	**Abhimanyu Kanase, Anshu Varghese, Aditya Deshmukh**
Guide Name	**Prof. Dr. Rahul.G.Mapari**
Sponsored Project	No
Area of Project (Domain)	Deep Learning
Relevance of Project	Application Oriented Project **

Project Abstract

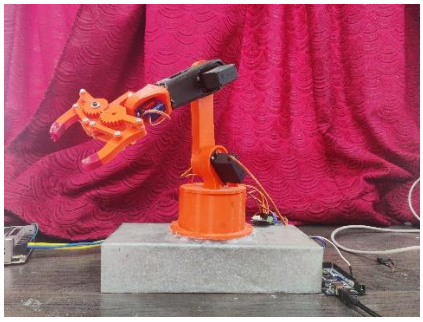
In traditional cotton harvesting, there were major concerns which included the preparation for plantation, determining the harvest season, manual labor, unavailability of skilled workers, and transport capability. To deal with this matter the robotic technology used by Cotton Harvesting Rover is capable of identifying cotton blossoms precisely with the aid of computer vision technology. The cotton is automatically identified by the system as it selects flowers from the fields using a robotic arm after analyzing specific attributes. The expected outcome of this idea is that the model should identify the mature cotton blooms accurately and the robotic arm should pick the cotton without much delay thus ensuring improved cotton harvesting.

Keywords: Cotton Picking, Computer vision, Deep learning, Object detection, YOLOv5

Project Block Diagram



Project Model



Project Outcomes

Copyright Registration No.	**L-137704/2023**
Patent Application No.	**202421040821**
Paper Title & ID	**Cotton Detection using YOLOv5** **ID:1477**
Conference /Journal Name	5th INCET 2024 sponsored by IEEE
Project Competition Participation	1. TECHFEST 2K24 INFOSPARK, ICEM, Parandvadi, Maval, Pune 2. AGROTECH FEST, PCCOER, RAVET, PUNE
Any Award/Prize for Project	2nd Prize in AGROTECH FEST

PO-PSO Mapping

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
3	3	3	2	3	2	1	3	3	3	3	3	3	3

Mapping Levels: 3: Strongly Mapped, 2: Moderately Mapped, 1: Weakly Mapped