


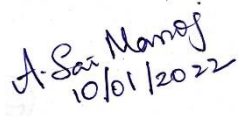

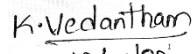



National Institute of Technology Calicut

Office of Dean (R & C)

Status Report : (DECEMBER (Month) – 2021 (Year))

Name of the Project Leader with Roll No.	POOLA ROHITH B180712ME
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Name of the Guide(s) & Department(s)	Dr. SUDHEER A P – Mechanical Department Dr. K SEKAR – Mechanical Department
Title of the Project	Robot Based Automation for Vertical Farming
Summary of Work Done in the previous months (In bulleted points)	<ul style="list-style-type: none"> • Conceptual designs of Manipulator and Lift are completed • Created a virtual environment for simulation of Manipulator • Implemented a deep learning model for vegetable detection. • Optimized the manipulator model and mechanism for lift. • Created CAD designs of end effectors for gripper and harvesting. • Performed static force analysis on the developed cad model for grippers. • Performed simulation of the mobile base in the virtual environment. • Performed kinematic simulation of the manipulator using ROS.
Work Done in this month (in bulleted points) (Please specify what part of objective(s) or outcome you are currently working)	<ul style="list-style-type: none"> • Currently working on Implementation of depth perception along with the object detection. • Currently working on the optimization of end effector design for harvesting and collection of new datasets. • Initiated the fabrication of the Manipulator and the base

Whether the goals are achieved or not as per the plan (If No, specify the reason)	<p>No</p> <p>Currently working on the optimization of the designs of end effector for harvesting and developing the deep learning models for depth perception.</p>
Signature of Project Members with Date	<div>  S. Karthik 9/01/22 </div> <div>  A. Sai Manoj 10/01/2022 </div> <div>  M. Thirumala 10/01/22 </div> <div>  K. Vedantham 10/01/22 </div>
Signature of Guide(s) with Date	<div>  10/01/2022 </div>