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

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| Name of the Project Leader with Roll No. | POOLA ROHITH  B180712ME |
| Ph. No. & email id Project Leader (other than institute email id) | 9441120187 – [rohith18p@gmail.com](mailto:rohith18p@gmail.com) |
| Name(s) of the Group Members with Roll No(s). | AKONDI SAI MANOJ – B180161ME  MAMIDI THEJONATH – B180129ME  KURAGANTI VEDANTHAM – B180473ME |
| Ph. No. & email id of Group Members (other than institute email id) | 6303364524 – [manojakondi25@gmail.com](mailto:manojakondi25@gmail.com)  9441214164 – [tejonathg21@gmail.com](mailto:tejonathg21@gmail.com)  9381222285 – [vedantham.kuraganti123@gmail.com](mailto:vedantham.kuraganti123@gmail.com) |
| 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) | * 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) | * 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) | No  Currently working on the optimization of the designs of end effector for harvesting and developing the deep learning models for depth perception. |
| Signature of Project Members with Date |  |
| Signature of Guide(s) with Date | 10/01/22 |