Microcontroller based Industrial Applications

Project Report

Project Title: Dynamic Solar-Panel Positioning System

Name- Aadit Agarwal

Email ID- aadit.agarwal2021@vitstudent.ac.in

Aim:

To develop a microcontroller-based solar panel positioning system that offers maximum energy capture from sun-light.

Result:

Solar Panel Positioning System has been designed successfully using microcontrollers. A solar panel positioning system, commonly referred to as a tracker, the aims to keep the panels aligned with the sun's rays for as much time, as possible throughout the day. This helps maximize the collection of energy. The micro-controller of choice is Arduino UNO.

The system was built with simple electronic tools such as servo motor, potentiometer, temperature sensor. These tools help to improve the accuracy, security, and effectiveness of a solar panel positioning system. These elements can aid in ensuring

that the panels are always in the most productive orientation, maximizing energy production and extending the panel life. These devices provide a dual layer of control – allowing for both automated efficiency improvements and manual control or feedback.

Overall, a microcontroller-based solar panel positioning system is a way that offers maximum energy capture from sun-light.