# Major-Project-Readme-File

Title of the Project: SOLAR TRACKING AND AUTOMATIC IRRIGATION

Project Idea:

Solar Tracking and Automatic Irrigation is a modern solution designed to enhance agriculture by improving water management, increasing crop yields, and reducing environmental impact. It addresses challenges such as water scarcity and climate change that affect traditional irrigation methods. The Solar Tracking and Automatic Irrigation integrates essential components: soil moisture sensors for precise scheduling, weather data for informed decisions, and real-time monitoring with intelligent algorithms for effective irrigation. This system focuses on conserving electricity and water. Automating the irrigation setup is to enable remote control and monitoring of

the status of the setup even when farmer is away from the location. This paper proposes a new system with the use of advanced sensors and a GSM module to provide SMS acknowledgment whenever there is any critical action that is initiated during the process. This includes water being pumped in excess to a crop, there is too much of sunlight for a sustained period and many other critical situations. The farmer will then have opportunity to, ARDUINO UNO, DC WATER PUMP, Moister Sensor, take necessary action It offers a sustainable solution for agriculture by optimizing water usage, improving crop yields, and reducing resource consumption.

Modules included in our Project:

1. Solar Tracking Module
2. Moisture Sensing Module
3. Irrigation Control Module
4. Power Management Module