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Title of the copyright:

Solar Panel Energy Management using Internet of Things.

Copyright work:

The Flowchart of Solar Panel as shown in below.

•Abstract

This project focuses on the development of a solar panel energy management system. It includes features such as a self-cleaning mechanism, solar tracking, and real-time energy monitoring. These features help make the use of solar energy more efficient and sustainable.

Our system enhances the performance of solar panels and ensures maximum energy production capacity. The self-cleaning feature keeps the solar panels free from dust and dirt, helping them work better and produce more energy. The solar tracking technology lets the panels change their position during the day to get the most sunlight, which increases the amount of energy they can capture.

Real-time energy monitoring gives user's immediate information about how much energy is being produced and used, helping them manage their energy better and make informed decisions. This project helps protect the environment while also allowing users to become more energy independent and save money.

This project not only helps protect the environment but also enables users to rely more on renewable energy sources. As a result, users can save money on energy costs and feel more in control of their energy needs.

Overall, this system encourages a cleaner environment and supports a more sustainable future for everyone.

•Motivation:

The motivation behind this project is to achieve three key features: a self-cleaning mechanism, solar tracking technology, and real-time energy monitoring. These features work together to enhance the efficiency and effectiveness of solar panels. The self-cleaning mechanism ensures that dust and debris do not hinder energy output. Solar tracking allows the panels to follow the sun's movement, maximizing sunlight exposure.

•Objectives:

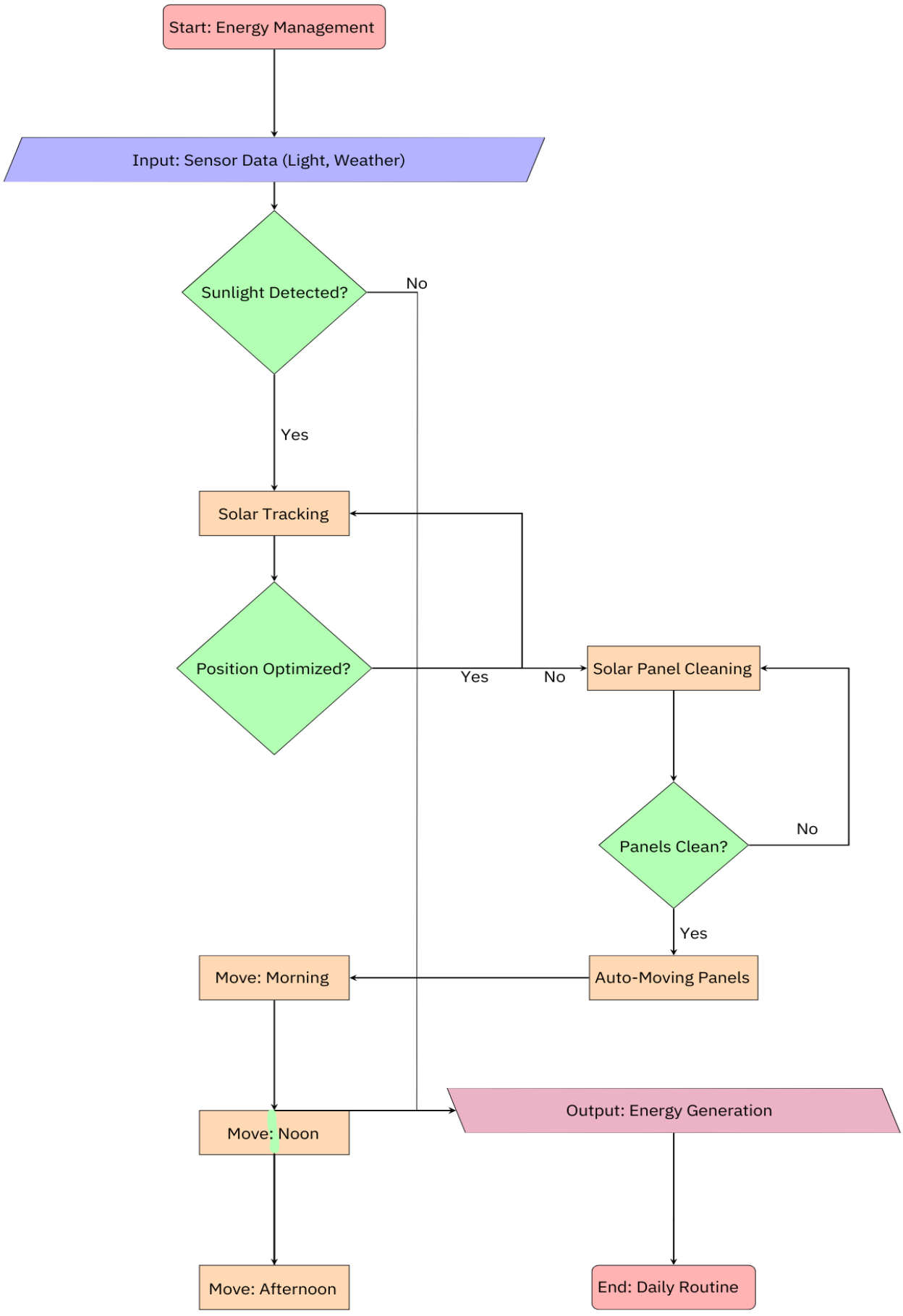
This system aims to improve the efficiency of solar panels, maximize energy production, and enable users to manage their energy consumption effectively.

•Flowchart:

As shown below :-

• Conclusion:

This solar energy management system is designed to enhance the efficiency of solar panels and provide features.


Start: Energy Management
Input: Sensor Data (Light, Weather)
Sunlight Detected?
No
Yes
Solar Tracking
Position Optimized?
Yes
No
Solar Panel Cleaning
Panels Clean?
No
Yes
Auto-Moving Panels
Move: Morning
Move: Noon
Move: Afternoon
Output: Energy Generation
End: Daily Routine