Anti-Rain Auto Retractable Laundry Rack
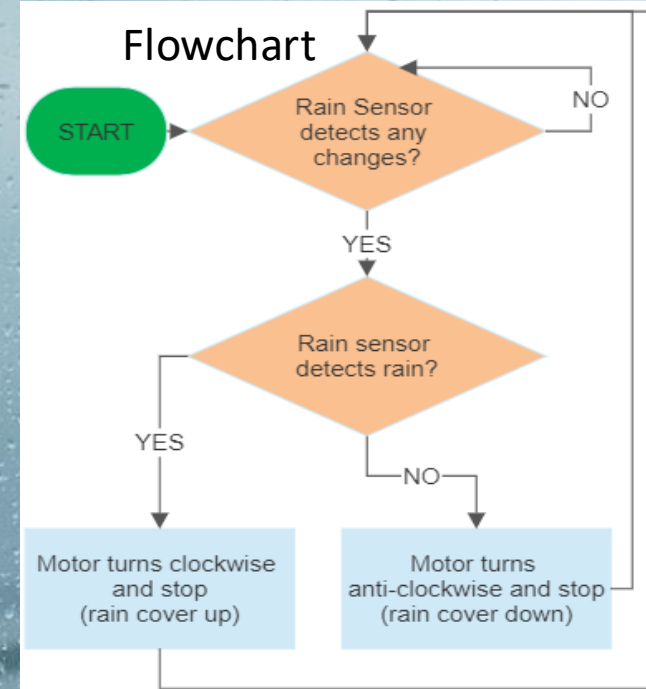
Aim: Design & Develop an Anti-Rain Auto Retractable Laundry Rack

Objectives: Allow users a sense of calmness even when away. No need to hurriedly return home to protect their laundry from rain
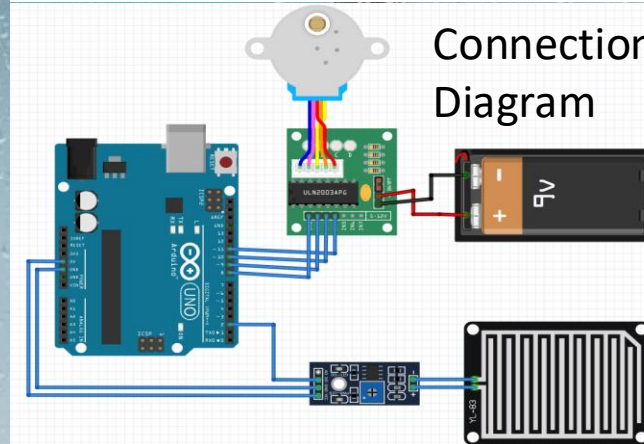
No Rain

Rain

Problem Statement: Outdoor clothes drying method is often disrupted by rain causing inconvenience and damage to laundry. Forcing users to constantly monitor the weather or risk wetting their clothes.

Results: Prototype is designed and developed to show the Anti-Rain Auto Retractable Laundry Rack's system function. The system autonomously covers and uncovers the laundry rack in response to weather conditions. Flowchart shows the flow of the system. The prototype pictures gives a visualisation of how the rain cover acts according to the scenario of rain and no rain.

Conclusion: The project has been successfully developed and implemented, achieving its primary objective of providing a hassle-free and efficient laundry drying process. The system's functionality was validated through thorough testing, and the results demonstrated its ability to detect rain accurately and respond accordingly.

Future work:
- Energy Efficiency
- Weather Forecast &
- Machine Learning Integration

Flowchart

START

Rain Sensor detects any changes? — NO

YES

Rain sensor detects rain?

YES → Motor turns clockwise and stop (rain cover up)

NO → Motor turns anti-clockwise and stop (rain cover down)

Connection Diagram

9V