AUTOMATIC PROTECTION OF CLOTHES FORM RAIN USING IOT

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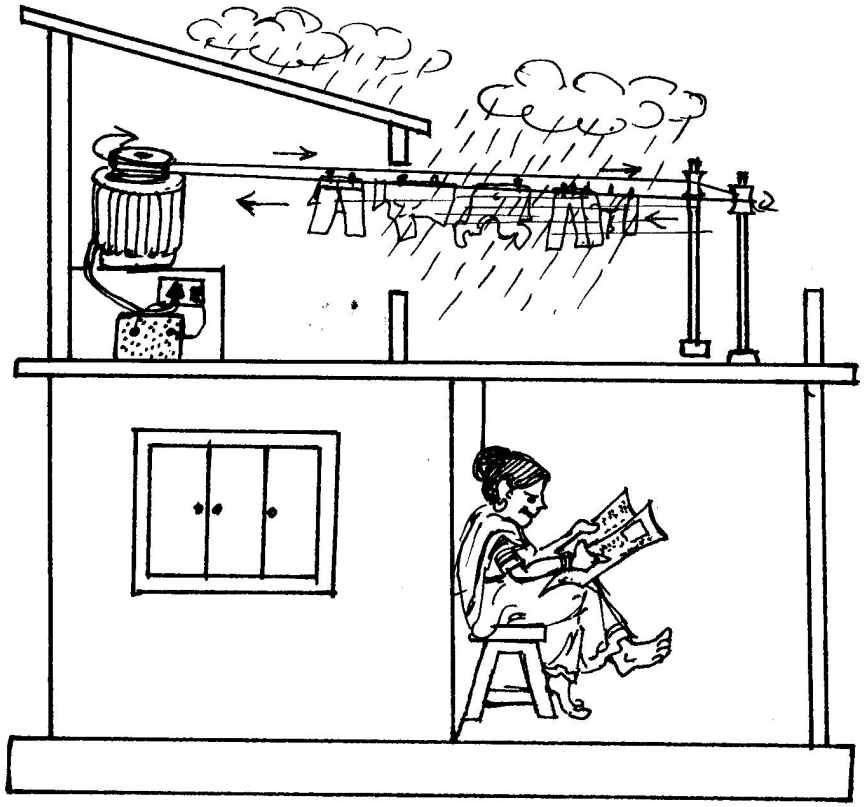
Introduction

- Now days it's difficult to predict the changes in seasons.
- During rainy seasons, sun rays are scarce, but it's possible to dry clothes by exposing them to sunlight as soon as possible.
- So there is need for human intervention who continuously monitors.



Literature Survey

S.No	Paper Tittle	Author and Year of Publication	Description/Interpretation
1	Automatic Clothing Drying Using Rain Sensors and Ldr Sensors Based on Arduino UNO.	Athaya Atsiqa , Andryan Gunawan , 2022 .	The study detects the weather and automatically moves the clothesline to a protected area. To address this, an Arduino microcontroller, Uno, rain sensor, and LDR sensor were developed. The tool detects weather conditions and automatically moves clotheslines to protected areas, detecting rain when the sensor doesn't receive light, and hot weather when the sensor detects sunlight.
2	Design and development of smart automated clothesline.	Mohamad Rohieszan Ramdan, Nor Hafiza Othman, 2021.	Rain sensor module is used to detect changes in weather and retrieve clotheslines when needed.The prototype system uses hardware such as an Arduino UNO rain sensor module, 5v 2ways channel opto isolator relay module, 12v actuator, 12 batteries, WIFI shield, breadboard, Arduino IDE software.
3	Designing an Internet of Things Based Automatic Clothesline.	n A. Salihi ,Steven Humena, 2019.	The NodeMCU ESP8266 is used to control the drying process using a smartphone and a rain sensor.

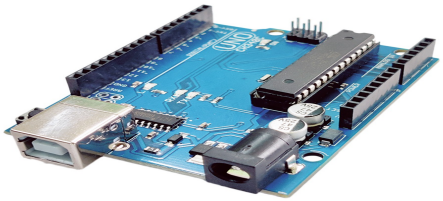
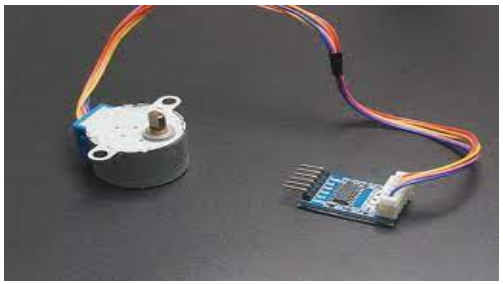
Problem Statement

- The project aims to automate the process of collecting clothes from clotheslines or drying racks during rain showers, reducing the time and inconvenience involved.

Proposed Method

- The proposed system will automatically retrieve-out the clothes when it is sunny day and oppositely retrievin the clothes when it is a rainy day.
- The project focuses on developing a Rain Detector Sensor that can detect rain and program a controller to control the motor to retrieve clothes.

- Proposed method for developing an automatic protection of clothes from rain using IoT involves:
- Rain Sensing Technology:Implementing high-precision rain sensors that can detect the onset of rain.
- IoT Connectivity:Integrate IoT connectivity to enable communication between the rain sensors and a central control system.
- Software:Utilize a small computing device (e.g., Arduino) as the brain of the system.

- Here are some of the key components typically used in this project:
  -  Arduino Uno
  -  Rain Sensor
  -  Stepper Motor

- 

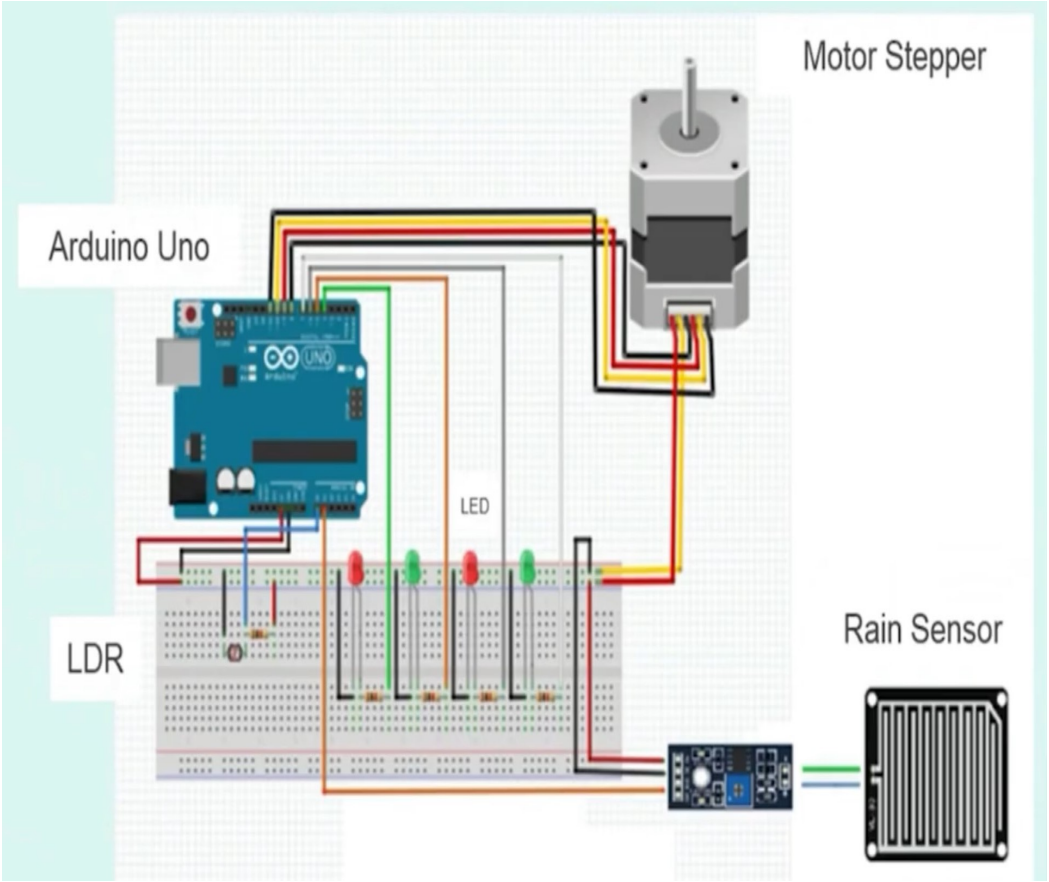
Stepper Motor Driver
- 
LED'S
- 
LDR
- 
BreadBoard and Jumper Wires

Proposed System Advantages

- The main advantage we can mention is time saving.The device will reduce our work and save our time.It is compatible with climate changes as the sensors are used, the device can easily recognize the climate changes.
- This project is useful for working couple, who dont find time to have laundry day where the cloth is dried through the whole day because the weather can change from sunny to rainy days.

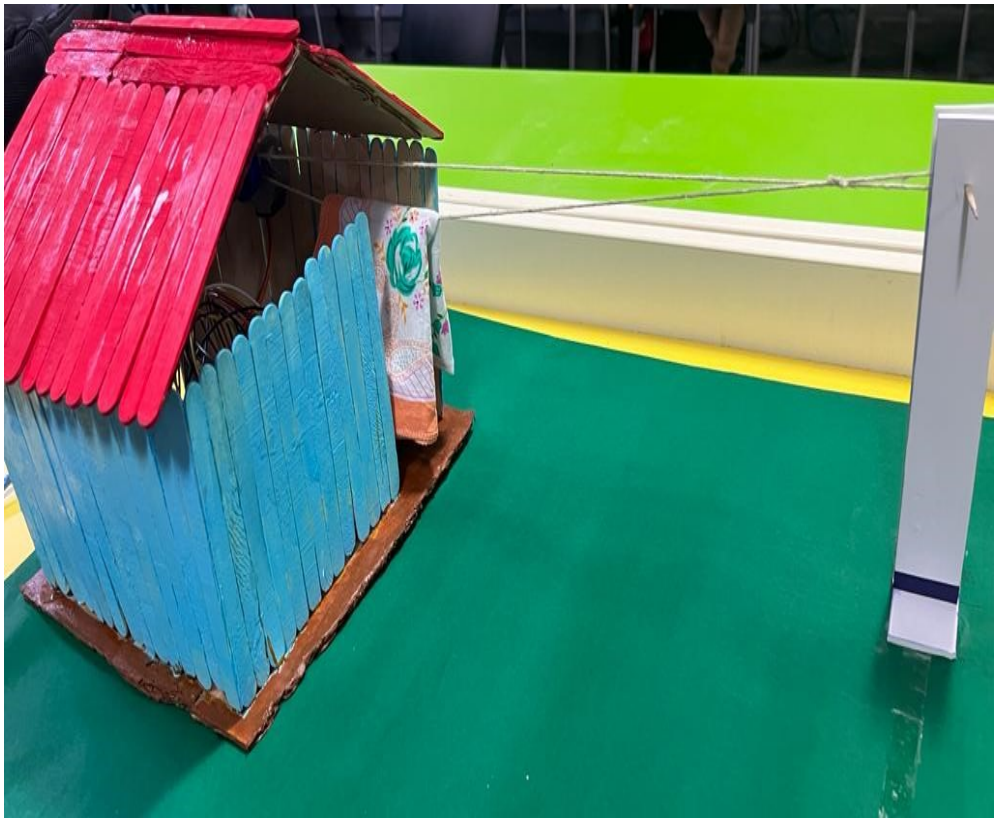
Implementation

- Circuit



Results

Results



Advantages

- Convenience:The system provides a hands-free solution for protecting clothes from rain.
- Extended Clothing Lifespan:By protecting clothes from rain, the system can contribute to extending the lifespan of garments.
- Enhanced User Experience:The System improves user experience by simplifying rain protection, reducing manual effort, and offering a sophisticated, modern solution.

Future Scope

- Improved Sensor Technologies:Advancements in rain-sensing technologies, are crucial for enhancing the system's ability to accurately detect rain.
- Integration with Smart Clothing:Smart clothing with sensors and motors could eliminate the need for external use and automatically activate protective features in response to rain.
- Weather Resistance:The designing components that can withstand various weather conditions and environmental challenges.

Conclusion

- The Creation of automatic rain protection for clothes using IoT lies in continuous advancements in rain-sensing technologies, ensuring more accurate detection and responsive protection.
- The proposed system will automatically retrieve-out the clothes when it is sunny day and oppositely retrievin the clothes when it is a rainy day With out any Human Requirement.
- This System not only showcases the potential of technology to enhance everyday experiences but also reflects evolving landscape where user needs.

References

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Thank you