DESIGN OF AN AUTOMATIC MONITORING AND CONTROL SYSTEM ON THE ROOF OF A CLOTHESLINE COVER BY INTEGRATING THE INTERNET OF THINGS AND THE BLYNK APPLICATION.

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ABSTRACT

Humans often rely on technology to support performance and meet their needs, leading to the use of technological tools for household tasks. However, during transitional weather periods, when conditions are unpredictable, drying clothes can become a cumbersome chore. In such situations, people may waste time and energy repeatedly lifting and drying clothes. One effective solution to optimize sunlight utilization while conserving time and energy is to develop a roof cover mechanism for clotheslines equipped with automatic controls. This system employs a rain sensor to generate analog values that detect drizzle, moderate rain, and heavy rain. Additionally, a Light Dependent Resistor (LDR) sensor produces digital values to assess light conditions, yielding outputs for both bright and dark environments. This information drives a stepper motor that operates the roof, allowing it to open or close over the clothesline. The hardware component includes a NodeMCU ESP8266 microcontroller, while the software comprises the Arduino IDE for program compilation and the Blynk IoT application for user interface management.

Keywords: Internet of Things, Monitoring, Rain Sensor, LDR Sensor, Automatic Clothesline Roof