

# ***PROTOTYPE OF HUMIDITY CONTROL SYSTEM IN AN IOT-BASED SWALLOW'S NEST ROOM***

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## **ABSTRACT**

*Swallow's nest is one of the commodities in the herbal medicine sector because it is believed to have various benefits, its shape is like a half-cup cut. Cultivation of swallow's nest is not easy, it requires a room with conditions that resemble a cave, therefore a humid room is needed. From this problem, a prototype of an automatic humidity control system was made using the DHT21 sensor, Water Sensor, Relay Module and Ultrasonic Mist Maker which was then processed by the Arduino NodeMCU ESP8266 microcontroller and displayed on the Blynk application with its latest web dashboard display. By utilizing a mist maker, the mist is made to humidify the bird's nest room to resemble its natural habitat in the cave, with an automatic system the required humidity limit can be set via Blynk, besides that, we can also operate the mist maker manually using the mist maker on/off button, by using the mist maker. With the help of the relay module, program commands can be run to turn the mist maker on or off. The test results from the DHT21 sensor have a temperature accuracy of 99.93% and humidity of 93.7% and the success of the system is 100%.*

**Keywords :** *Swallow's Nest, Automatic System, Mist Maker, Blynk*