|  |  |
| --- | --- |
| **Title:** | Design and Implementation of Temperature & Relative Humidity Control System for Poultry Farm |
| **Author(s) Name:** | Mohammad Zeyad; Prodip Biswas; Susmita Ghosh; Md. Tanvir Hassan Maruf; Md. Shehzad; Md. Ibrahim Hasan; Sheikh Raihana Shoshi |
| **Contact Email(s):** | susmitaghosh14@aiub.edu |
| **Conference Name:** | 2020 International Conference on Computational Performance Evaluation (ComPE) |
| **Type of Publication:** | Conference |
| **Publisher:** | IEEE |
| **Publication Date:** | 18 September 2020 |
| **ISBN:** | Electronic ISBN:978-1-7281-6644-5  Print on Demand (PoD) ISBN:978-1-7281-6645-2 |
| **DOI:** | 10.1109/ComPE49325.2020.9200032 |
| **URL:** | https://ieeexplore.ieee.org/document/9200032 |
| **Other Related Info.:** | pp. 189-193  Keywords: AM2302 (Temperature & Humidity sensor); LCD  display (16\*2); Matrix keypad (4\*4); Microcontroller  (ATmega328p); Temperature & Humidity Control |
|  | |

|  |  |
| --- | --- |
| **Abstract:** |  |
| This paper presents a control strategy for automatic temperature and relative humidity control systems for poultry farms. This work aims to build a simple but automated smart Poultry Farm device that will be suitable for a poultry farm environment for controlling temperature and relative humidity. Moreover, for better understanding of inside environment of the poultry farms survey analysis (for the maximum temperature, minimum temperature and relative humidity) had done for 12 months of 2019 on different areas/places of 100 poultry farms of Bangladesh. Additionally, the process of controlling the temperature and relative humidity control uses a microcontroller (ATmega328p) that receives data from the sensor AM2302 and controls suitable temperature and humidity by using a logic algorithm code. Poultry needs a standard temperature and humidity which have been set within 20 °C-25 °C and 60%-80% respectively. Nevertheless, an LCD display (16\*2) with Matrix keypad (4\*4) has been included in the device by which farmers can easily set, operate and check the required temperature and humidity inside the poultry farms. Finally, sensor testing and device administration results are documented to achieve the success of the research. | |