

## 摘 要

随着环境安全意识的提高，保护生存环境越来越受到人们的重视。现阶段社会对于养殖场环境的重视程度极低，对畜牧业养殖场的环境进行监测显得尤为重要。养殖场环境监测系统对养殖场周边环境的各类数据进行监测，达到更安全工作环境和更高效的工作效益。

基于物联网的肉牛养殖场环境监测系统基于物联网三个基本层次：感知层应用传感器技术，采集温度、光照、有害气体三项指标的实时数据。传输层应用 wifi 无线传感模块技术完成感知层数据与应用层的传输；应用层应用 JAVA-Web 技术，以 B/S 结构为设计结构，Web 服务器端完成用户登录查询任务以及数据可视化等操作，向用户提供有效数据。

本项目实现对温度、光照、有害气体进行实时数据监测，精度良好，为用户提供准确的数据进而帮助用户完成对环境的预防和干预。器件尺寸小，便于安装；价格低廉；使用简单方便。不足点在于监测范围和传输范围有限，无法完成大规模区域内的环境监测。

**关键词：** 物联网养殖场系统，环境监测， JAVA-WEB， B/S 结构

## Abstract

With the deterioration of global environment, people drawing more and more attention , as a place where people and animals live together, it is necessary to monitor the environment more strictly<sup>[1]</sup>.The environmental monitoring system of the farm monitors all kinds of data of the surrounding environment of the farm to achieve a safer working environment and more efficient working efficiency.

Application level of the design:the sensing layer applies sensor technology to collect real-time data of temperature, light and harmful gases. WiFi communication is used to complete the operation of data transmission layer; In the application layer, Java Web technology is applied, B / S structure is used as the design structure, and the web server end completes the user login query task and data visualization and other operations to provide the user with effective data.

This project realizes the real-time data monitoring of temperature, light and harmful gas, with good accuracy, and provides users with accurate data to help users complete the prevention and intervention of the environment. The system has the advantages of simple use, low price and small space occupation. The disadvantage is that the monitoring range and transmission range are limited, and it is unable to complete environmental monitoring in large-scale areas.

**Key words:** information management system of farm, Environmental monitoring, java-web, B/S structure

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