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CAWANGAN JOHOR KAMPUS PASIR GUDANG

FINAL YEAR PROJECT (EEE368)

CATTLE HEALTH MONITORING SYSTEM

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ABSTRACT

This project focuses on developing an IoT-based cattle health monitoring system using the Arduino microcontroller. The main aim is to create a device capable of accurately measuring and monitoring vital signs like temperature, humidity level, and heart rate in cattle. The device utilizes various sensors and communicates the gathered data to an Android app through a WiFi module. The simulation results demonstrate the device's effectiveness in collecting and transmitting data to the app for analysis. Anomalies in temperature, humidity, and heart rate trigger an alert displayed on an LCD screen and activate a buzzer, indicating the need for further assessment of the cattle's health. The significance of this study lies in its potential to enhance livestock management by enabling early detection of health issues and facilitating prompt intervention. Future work could involve expanding the system to include additional health parameters and integrating it with a centralized monitoring platform for comprehensive herd health management.

Keywords— IoT, cattle health monitoring, Arduino, vital signs, temperature, humidity, *heart* *rate.*

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CHAPTER 1

INTRODUCTION

1.1   Background

The genesis of the cattle health monitoring system traces back to a realization of the technological gap in traditional farming practices. Witnessing the challenges faced by farmers in monitoring the health of their cattle, there were motivations to bridge this gap by leveraging the capabilities of Arduino microcontrollers and IoT technology. The aim was to empower farmers with a system that could provide real-time insights into crucial parameters such as temperature, humidity, and heart rate.

The choice of Arduino as the core technology was deliberate, given its versatility and ease of use. The vision was clear – to simplify the complexities of traditional farming by infusing it with the benefits of modern technology. Despite encountering obstacles along the way, the determination to contribute to agricultural innovation and livestock management remained unwavering. The overarching goal was to create a solution that not only addresses immediate challenges but also aligns with the broader narrative of merging technology seamlessly with agriculture for practical, impactful, and sustainable results.