VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590018

Mini Project Report on

"ARDUINO BASED BIRD AND ANIMAL REPELENT SYSTEM"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
AGRICULTUR ENGINEERING

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CERTIFICATE

Certified that the mini project work entitled "**ARDUINO BASED BIRD AND ANIMAL REPELENT SYSTEM**" is the bona-field work carried out by **H P Y SACHIN (4AL21AG012), MONISHA S (4AL21AG021), PRANEETH (4AL21AG025) and SUSHA S SHETTY (4AL21AG032)** in partial fulfilment for the award of Bachelor of engineering in Agriculture engineering of **Visvesvaraya Technological University, Belagavi** during the academic year 2023-2024, it is certified that all corrections and suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirement in respect of mini project work prescribed for the said degree.

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ABSTRACT

One of the major problems facing the globe today is crop damage caused by animals. Crops can sustain severe damage from animals like monkeys, birds and other animals. In addition to organizing outside the field and squashing an excessive amount of crops, they can harm the plants by eating on plant parts. As a result, animals can quickly result in large yield losses as well as further financial difficulties. There are numerous strategies to lessen the issues or harm that animals bring to farmers and ultimately ruin their farms. Some methods are governed by state and federal legislation, while others remain untested. These methods include haunting the animals, manually creating the sounds, and employing chemical substances to repel birds and animals. Thus, by applying the concepts of bio acoustics, dangerous animals can be repelled by ultrasonic device actuation. Humans can hear frequencies between 20 Hz and 20 kHz. Like humans, every animal has a unique hearing range. For example, rats can hear between 200 and 90 kHz, whereas snakes can hear between 80 and 1 kHz.

However, even within this range, snakes can only hear in what is referred to be their most sensitive hearing region, which serves to repel other species. An improvement over the existing techniques that makes use of ultrasonic frequencies has been developed toS discourage animals. Depending on the animal species to be repelled at a given time, ultrasonic animal repellent emits varying sound frequencies. Therefore, to keep animals away from farms, high-frequency and high-amplitude sound waves are employed. Rodents and animals, such as monkeys,birds and other animal can be turned off by those ultrasonic noises.

Different electronic circuits will be created to produce sound waves at different frequencies in order to repel different kinds of animals. These frequencies are used to deter animals by radiating into the air after being time-multiplexed using an Arduino UNO. An amplification circuit is to be used to increase the signal strength. The speaker receives these boosted impulses so that it can emit various sounds at various intervals. Nonetheless, people's capacity to hear is unaffected by these frequencies