**PROJECT REPORT**

(Project Term MAR-APR, 2023)

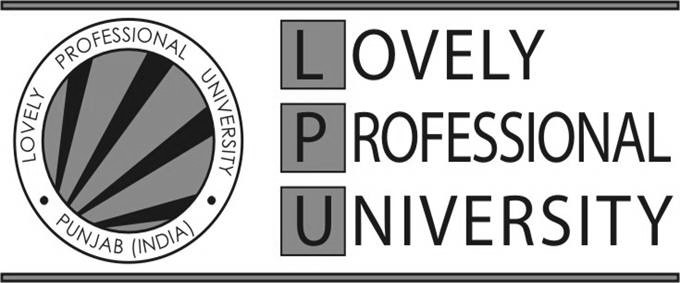
# AI IN Agriculture

Submitted by

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## School of Computer Science and Engineering



# DECLARATION

We hereby declare that the project work entitled "AI IN AGRICULTURE"” is an authentic record of our own work carried out in B.Tech degree in Computer Science and Engineering from Lovely

Professional University, Phagwara, under the guidance of Ms. Akshara Rana , during Mar to

Apr 2023. All the information furnished in this project report is based on our own intensive work and is genuine.

# ACKNOWLEDGEMENT

We take this opportunity to present our votes of thanks to all those guidepost who really acted as lightening pillars to enlighten our way throughout this project that has led to successful and satisfactory completion of this study.

We are really grateful to Akshara ma’am for providing us with an opportunity to undertake this project and providing us with all the facilities. I am highly thankful to mam for her active support, valuable time and advice, whole-hearted guidance, sincere cooperation and pains-taking involvement during the study and in completing the assignment of preparing the said project within the time stipulated.

Lastly, I am thankful to all those, particularly the various friends , who have been instrumental in creating proper, healthy and conductive environment and including new and fresh innovative ideas for us during the project, without their help, it would have been extremely difficult for us to prepare the project in a time bound framework**.**

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# INTRODUCTION

Traditional methods for livestock health monitoring typically involve regular observation and inspection of the animals by trained personnel. This can include checking the animals' behaviour and appearance, taking their temperature, listening to their heart and lung sounds, and examining them for any signs of illness or injury. Livestock health monitoring is an important aspect of modern farming, as it ensures the well-being of the animals and the quality of the products derived from them. In recent years, advances in artificial intelligence (AI) have made it possible to use this technology for livestock health monitoring, which has the potential to provide several benefits compared to traditional approaches. Before diving into further details regarding automatic systems, it is important to first understand the traditional methods of livestock health monitoring.

**MODULES**

Use of AI in Agriculture:

1. Wearable Devices: One approach is to use wearable devices that track the animal's vital signs such as temperature, heart rate, and respiration. These devices can transmit real-time data to a centralized system, which can analyze the data and alert farmers or veterinarians to any abnormalities or potential health issues.
2. Image Recognition: Another approach is to use image recognition technology to detect signs of illness in animals. For example, AI can analyze images of a cow's face or eyes to identify symptoms of disease, such as a fever or inflammation.
3. Sound Recognition: AI can also be used to monitor the sounds that animals make, such as their breathing or coughing, to detect potential health problems.
4. Data Analysis: AI can analyze large amounts of data to identify patterns and trends that may indicate potential health problems. For example, AI can analyze data on an animal's feed intake, weight, and other health indicators to detect early signs of illness.

# FEASIBILITY STUDY

Every project would be feasible, if provided with unlimited resources and unlimited time. But unfortunately, the development of computer-based system of game ssssis more likely plagued by a security of resources and difficult time constraint. It is both necessary and prudent to evaluate the feasibility of the project at the earliest possible time. During software engineering we concentrate our attention on four primary area of interest. The techniques used in conducting an initial investigation and feasibility study are very similar but the objectives are not so.

The major objectives of feasibility study are to further define the problem and to

determine the best way to solve it. The typical primary objectives are:

* A centralized database will be developed.
* Runtime operating decision-making will be eliminated.
* Unnecessary control procedure will be automated.
* The minimum of paper work should be produced.

The output produced by the system should be in a usable format

# Requirement of project

## Hardware and Software Requirements of Project

Hardware Requirement:

Here is the recommended hardware requirement for this software to run efficiently. 1) Intel core i5 or higher processor

1. 10 MB RAM
2. 15 MB free hard disc space
3. SVGA monitors / Laptops 5) Printer (Optional)

Software Requirement:

This software comes under application software. So the necessary software for this is

1. Windows operating system family.
2. java jdk , 3D modelling tools, python.
3. Sqlite3 or any other database

**BRIEF MODULE:**

Image recognition artificial intelligence (AI) can play an important role in livestock health monitoring by allowing for early detection of potential health issues. This can help farmers and veterinarians to quickly identify and address any health problems before they become more serious.

Using image recognition AI, cameras can be set up in livestock enclosures to capture images of the animals. The AI can then analyze the images and identify any anomalies or abnormalities that could indicate a potential health problem. For example, it could detect changes in the animal's posture, movement, or behavior that could be indicative of pain or discomfort.

This technology can also be used to monitor the overall health and well-being of the animals by analyzing factors such as their weight, body condition score, and even their facial expressions. This information can help farmers and veterinarians to identify potential health issues early on and take the necessary steps to address them.

Overall, image recognition AI has the potential to revolutionize livestock health monitoring by providing a more efficient and effective way to identify and address health issues in real-time.

# Bibliography

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The matter contained in this project has been taken from the given links:-

* https://www.outlookindia.com/business-spotlight/automatic-systems-for-livestock-health-monitoring-using-ai-are-changing-lives-bhusan-chettri-news-256619

* htthttps://www.v7labs.com/blog/ai-in-agriculture#:~:text=Count%20animals%2C%20detect%20disease%2C%20identify,access%20to%20food%20or%20water

# Github Link

\* https://github.com/Swaraj468/AI-project.git