



DETECTION AND PREVENTION OF CATTLE DISEASES AND PROVIDING HEALTH CARE WITH ENTREPRENEURIAL SUPPORT FOR FARMER'S

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ABSTRACT

Livestock sector contributes 4.11% GDP and 25.6% of total Agriculture GDP and About 20.5 million (16%) people in India are depended on livestock for livelihood, But there is about 20-30% of animal production loss which are linked to animal diseases.

The Detection & Prevention of cattle diseases & providing health care with Entrepreneurial support for farmers will revolutionize the way animal healthcare is delivered. With its comprehensive information and user-friendly interface, it will provide a valuable resource for the animal healthcare community, helping to improve the quality of care for animal patients.

The disease detector would provide the information related to the disease which was detected after processing the image uploaded by the user. We can also detect the disease by providing the visible symptoms in animals. It would provide the recommendations how to deal

with the current situation. The nearest veterinary to consult with for dealing with a worst condition.

The assistant also provide a convenient and accessible way for the animal veterinary care by including the features like Disease detection, Primary Hospitality, Suggestions for secondary treatments, Health Tracking of animals, Experience Sharing, Start-up ideas, Expand your business, Schemes etc.

SURVEY

The Animal Welfare Department is taking initiatives like the Animal Health Summit to address animal pandemic preparedness.

India has 56.7% of the world's buffaloes, 12.5% cattle, 2.4% camel (10th in camel population in the world) and 3.1% poultry (2nd largest poultry market in the world).

Livestock sector contributes 4.11% of GDP and 25.6% of total Agriculture GDP.

India has a large and diverse livestock population, with over 500 million cattle, buffalo, goats, and

sheep etc. The country is also a major producer of milk and dairy products, with the dairy sector providing employment and income to millions of rural households.

WORKING PRINCIPLE

This project is a web-based application which is developed using Python (Django Framework) with SQL lite for Backend and Html, CSS, JS and Boot Strap for Frontend Development. The Disease detector using Django would be consisting of image processing/Image comparing which would be detecting the major, common and deadly diseases on the basis of input image given. Some of the diseases would be detected on the basis of Symptoms which are noticed by the animal owners. This system would recommend start-up ideas related to animals, it would also help to expand existing businesses & would provide more information about the available schemes.

Application of model and advantages over existing version of model:

1. Cattle Disease Detection by Image Processing/Comparing
2. Cattle Disease Detection by visible symptoms
3. Primary and secondary health care.
4. New Start-ups ideas for farmers to increase their income
5. Expanding existing farming business and increasing income.
6. Awareness about the available schemes

There is no existing system.

INTRODUCTION

Animal husbandry in India faces several challenges, including inadequate infrastructure, lack of access to veterinary care, and the spread of infectious diseases.

We can overcome all these challenges by Detection and prevention of Cattle Diseases and Providing Health Care with Entrepreneurial Support for Farmer's using python programming language. Here we are using Django Framework for Image Comparison and detection. According to detection of disease, we will providing best Treatment for Animals.

The assistant will provide a convenient and accessible way for the animal veterinary care by including the features like Primary Hospitality, Suggestions for secondary treatments for diseases, Vaccinations for animals, Health Tracking of animals, etc.

This would give a platform to animal owners for presenting themselves, sharing their experience / problems and would encourage beginners to start their own business related to animals.

Spreading awareness about the available Government & Non – Government Schemes available for farmers & Animal owners would be a major module.

PROBLEM STATEMENT

Animal diseases routinely emerge from factory farming operations and put them at significant financial risk.

Overcrowding and unmanaged waste as well as animal illness, infection, and stress all rank among the standard factory farming conditions that diminish animals' ability to fend off disease and enhance the inevitability of outbreaks and spread. As of mid-2020, the Paris-based World Organisation for Animal Health (OIE) has identified 117 infections and transmissible illnesses affecting factory-farmed animals around the globe.

A number of financial risks are associated with animal diseases. Outbreaks can result in costly livestock losses as a result of both infection and the intentional culling of flocks or herds as well as supply chain interruptions, cessation of import/export activity, decreased consumer demand, diminished market prices, and significant reputational damage even to factory farming operations whose livestock has not been directly affected.

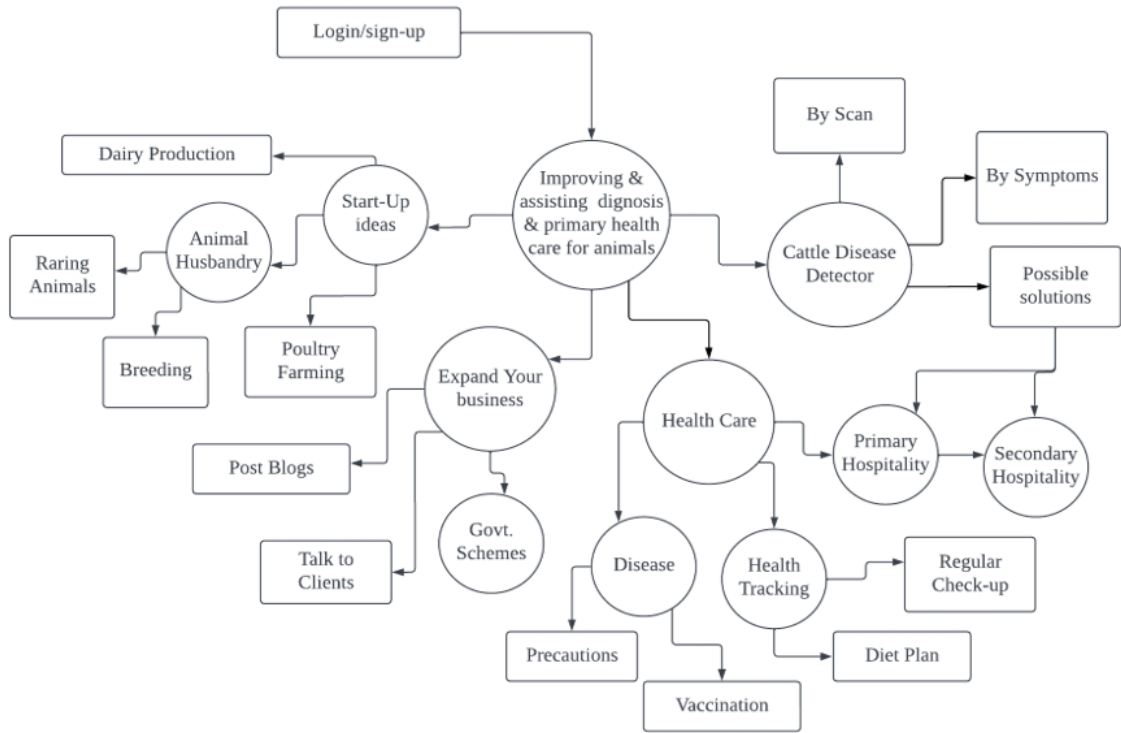
Detection and Prevention of Cattle Diseases One of the major problems that farmers face is the spread of diseases among their cattle. Early detection and prevention of these diseases are crucial to minimize the impact and prevent them from spreading to other animals. However, most farmers lack the knowledge and resources to identify these diseases and take appropriate measures.

Providing Healthcare for Cattle Access to healthcare is critical for the well-being of cattle. However, farmers in rural areas often lack access to veterinary care, and even if they do, it can be expensive.

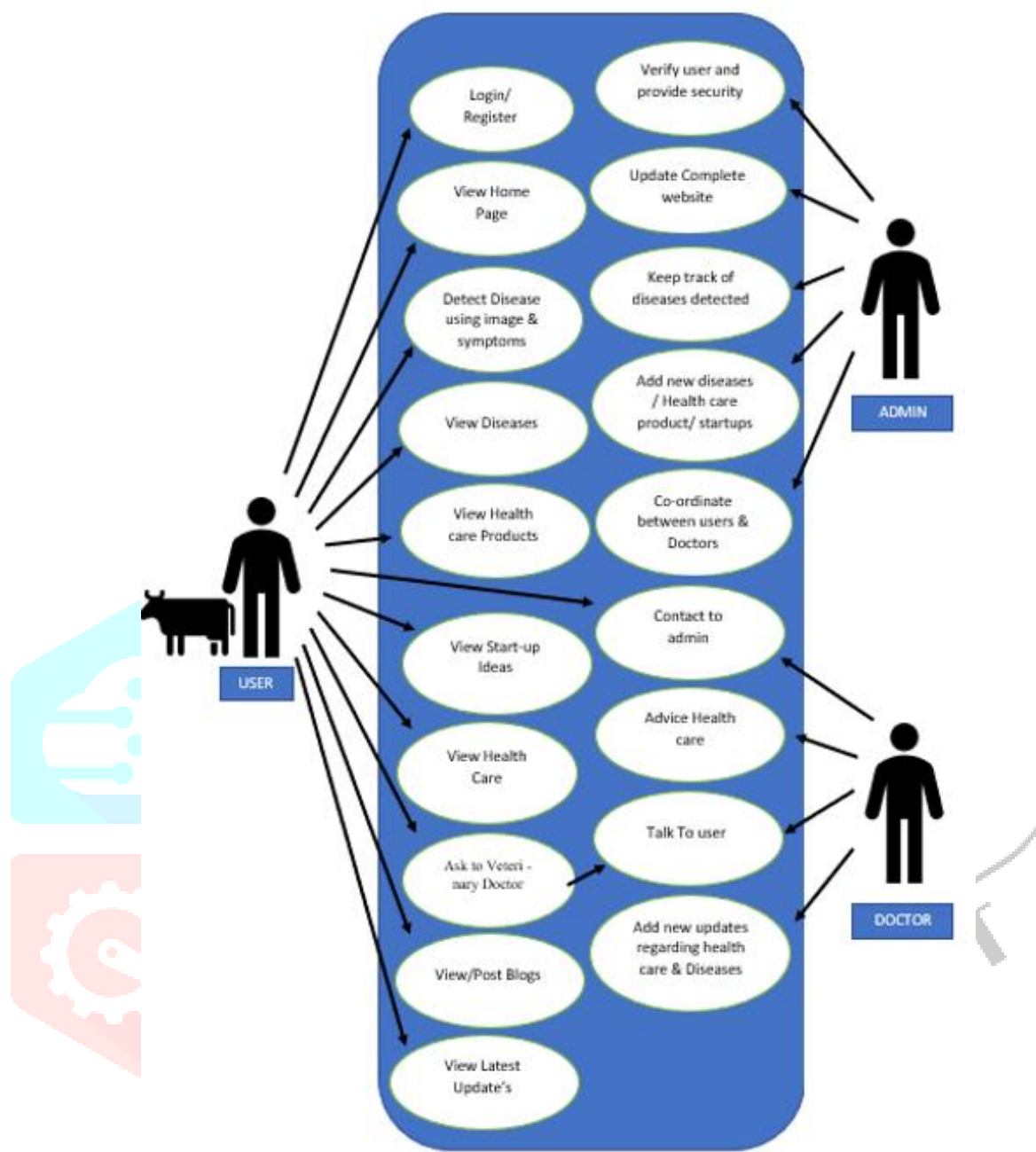
PROPOSED SOLUTION

1. The project aims to address the challenges faced by farmers in detecting, preventing, and treating cattle diseases.
2. It focuses on improving the economic well-being of farmers by promoting sustainable and profitable agriculture practices.
3. The project involves providing healthcare support and entrepreneurial resources to farmers, such as training, education, access to veterinary care and medicines, and financial support.
4. **Detection and prevention of Cattle Diseases and Providing Health Care with Entrepreneurial Support for Farmer's**, this Project is to develop an assistant which will provide a convenient and accessible way for Animal owners, veterinarians and animal healthcare providers.
5. The system that can analyse images of cattle to identify symptoms of diseases. It can detect diseases like Mad Cow Diseases, Bovine Respiratory Disease, Mastitis, etc. and provide the detailed information with the steps that should be followed for fast recovery with contact details and location of the doctor.
6. Provide farmers with a web-based application that they can use to capture images of their cattle and receive immediate feedback on the potential presence of any diseases. The application use Django Framework for computing to process the images and provide real-time results to the farmers. The system also include information on proper sanitation, hygiene, and vaccination practices.

DATA FLOW DIAGRAM



USE CASE DIGRAM



MODULES

- Detection of disease by image processing
- Detection of disease by symptoms
- Ask to doctor
- Health Care Products
- Latest Updates
- Health Care:
 - Primary Hospitality.
 - Suggestions for secondary treatments for diseases.
 - Vaccinations for animals.
- Diet Plan for animals.
- Health Tracking of animals.
- Sanitary Needs.
- Regular check-ups.
- Home Care suggestions.
- Blogs by animal caretakers
- Start-up Ideas
 - Animal Husbandry
 - Animal Hostel
 - Poultry Farming
 - Dairy Production

- Fish Farming
- Sheep Farming
- Duck Farming
- Expand your Business
- Schemes available
- Feedback
- Contact Us
- Login/Sign-up

FUTURE SCOPE

- The system can be further developed to expand the detection to multiple diseases.
- Connect Multiple doctors to provide accurate and on time medication of all diseases.
- The use of drones and other advanced technologies can also be explored to improve disease detection and monitoring.
- The significant potential to improve the health and well-being of cattle, support the livelihoods of farmers, and promote sustainable agricultural practices.
- One of these challenges is access to veterinary care, particularly in rural and underserved area.
- Another challenge is the need for ongoing research and development to keep pace with the ever-evolving field of veterinary medicine.

CONCLUSION

Detection and prevention of Cattle Diseases and Providing Health Care with Entrepreneurial Support for Farmer's is crucial to improving the agricultural sector and promoting sustainable practices. By using of this System along with

provided solution farmers can improve the health and well-being of their cattle and increase their income and competitiveness in the market. With its comprehensive information and user-friendly interface, it will provide a valuable resource for the animal healthcare community, helping to improve the quality of care for animal patients.

The assistant will provide a convenient and accessible way for the animal veterinary care by including the features like Primary Hospitality, Suggestions for secondary treatments for diseases, Health Tracking of animals, Experience Sharing, Start-up ideas, Schemes etc.

REFERENCES

- 1] Animal production and welfare issues: dairy cattle and veal calves. North American Veterinary Conference, 1998; Orlando, Fla. 1998; 902 p. Proceedings of the North American Veterinary Conference, 1998.
- 2] India Animal Health Summit 2022-
<https://www.icfa.org.in/animalhealthsummit/>
- 3] Sonali Behera "Tips for Profitable Cattle business in India"
<https://krishijagran.com/animal-husbandry/5-profitable-cattle-business-tips-for-purchasing-and-selling-cattle>
- 4] Centres for Disease Control and Prevention (CDC)
- 5] Indian Council of Agriculture Research (ICAR)