

Date	10 July 2024
Team ID	739922
Project Name	Beyond The Veil Of Wellness: Machine Learning's Unique Journey In Animal Health Classification
Maximum Marks	3 Marks

In the ever-evolving landscape of animal care and welfare, ensuring the well-being of our furry, feathered, and finned companions is a complex challenge. Traditional methods of animal health assessment are often limited by subjectivity and time-consuming procedures. This project, titled "Harmonizing Health and Machine," represents a ground-breaking endeavour at the crossroads of animal care and advanced technology. At its core, this project seeks to leverage the power of machine learning to revolutionize the assessment of animal conditions. Through the use of cutting-edge algorithms, deep learning techniques, and large datasets, we are venturing into uncharted territory. The intricate data challenge posed by animal health assessment is being addressed with a unique approach that promises to redefine the way we care for animals.

The diagram illustrates the Farm Decision Support System (FDSS) architecture. It shows the flow of information from various sources to a central data cloud, which then feeds into predictive models, alerts, and mechanistic models. The system involves multiple stakeholders: External, Farm, Animal, Farmer, and Veterinarian.

- External**: Weather Landscape, ...
- Farm**: Building, Ambiance, Detection, Trade, ...
- Animal**: Health, Production, Behaviour, Feeding, ...
- Sensors**: Collect data from the Farm and Animal.
- DATA**: Central cloud storage for all collected data.
- Predictive models**: Use data to generate alerts.
- Alerts**: Generated by predictive models.
- Mechanistic models**: Use data to generate alerts.
- Farmer**: Receives alerts and uses parameterisation tools.
- Veterinarian**: Provides rationalised treatments and advises the farmer.
- Software**: Used by the veterinarian to rationalise treatments.

The process flow is as follows:

- Observe / Decide**: The farmer observes the farm and animal data.
- Parameterise tools**: The farmer uses tools to parameterise the data.
- Inform**: The veterinarian informs the farmer.
- Advise**: The veterinarian advises the farmer.
- Rationalise treatments**: The veterinarian rationalises treatments.

