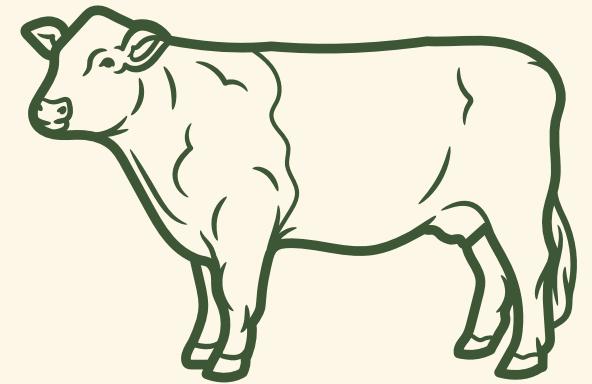




SKYVET

Ensuring Food Security for Future Generations

Presented By:
Joshua Tapia & Kevin Lafreniere



WHAT IS OUR PROJECT GOAL?

We are wanting to help farmers take better care of their livestock and crops by incorporating computer vision and drones into their farming to enable strategic & proactive approaches when tending to their livestock. Increasing ROI (return of investment)

HOW WE TACKLED THIS PROJECT?

Using Keras to build our disease detection models and the Tello SDK with openCV to locate the cows.

WHAT WE WILL ADD GOING FORWARD?

In the future we would like to implement chatgpt to give farmers a easy and intuitive way to work with the drones

WHAT IS OUR PROJECT GOAL?



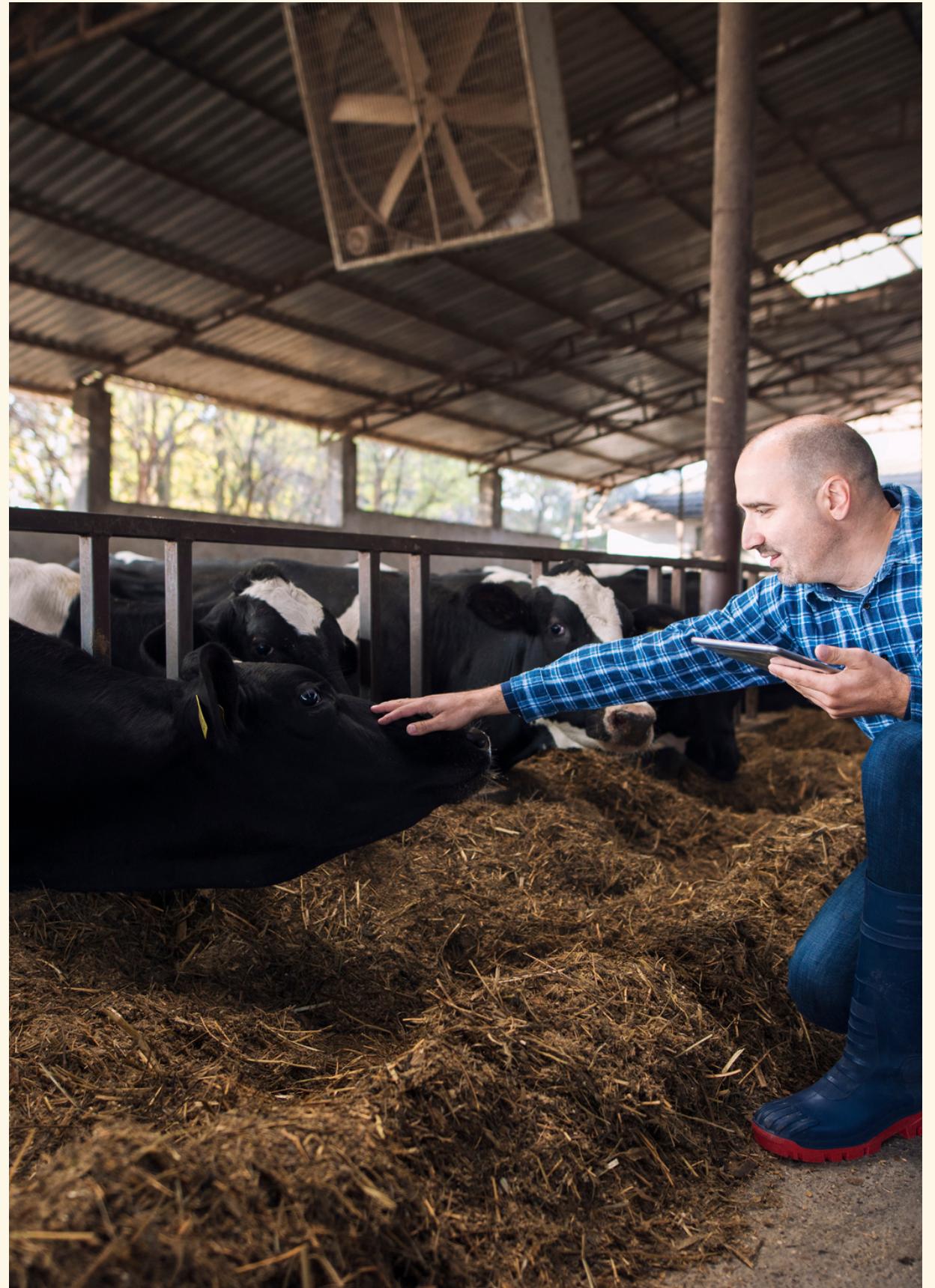
STRATEGIC FARMING BY PRIORITISING LIVESTOCK HEALTH

What are the problems?

- Farmers have a lot of jobs they need to tend to and may overlook animals that need extra care.
- Farmers may see that their livestock or crops are ill, but cannot identify which illness they have. In more remote locations, it may take time for vets to arrive or they simply may not have the resources.

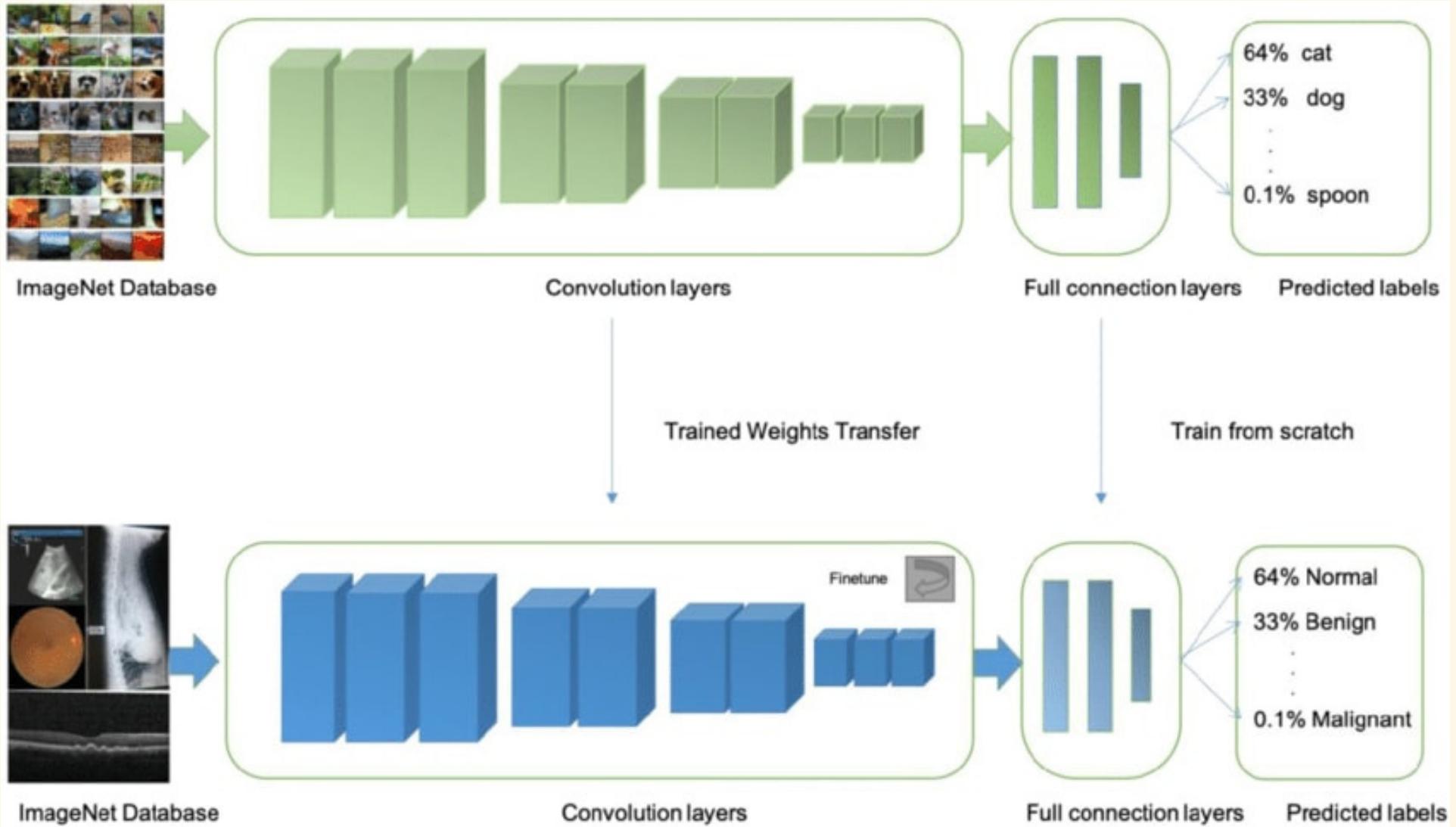
How can we solve this?

- We can use drones or robots to monitor animals and crops, meanwhile farmers tend to the rest of the farm
- Computer Vision and Machine Learning can help identify diseases reducing the rate of severity & eventually death on their livestock





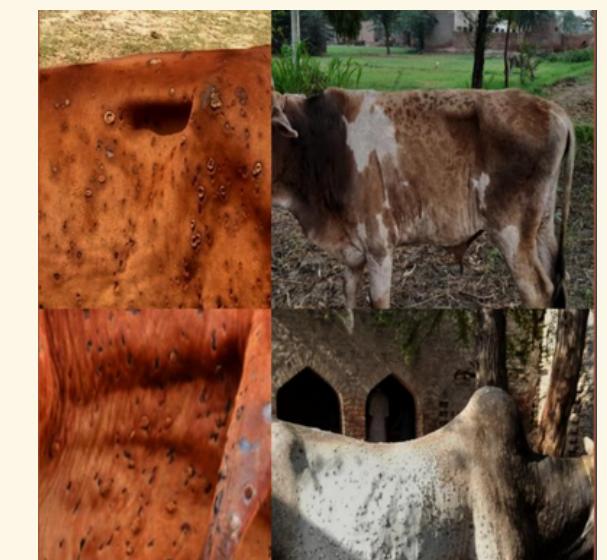
**HOW DID WE
TACKLE THIS
PROJECT?**



**Tomato
Bacterial spot**



**Lumpy Cow
Disease**



Gathered data

- [Kaggle](#)
- [RoboFlow](#)



Built our model

- Image Transformations
- Transfer Learning: ResNet50
- Keras
- Added our own Dense layers

Implemented Tracking for Cows

- OpenCV
- Premade Model
- Tello SDK

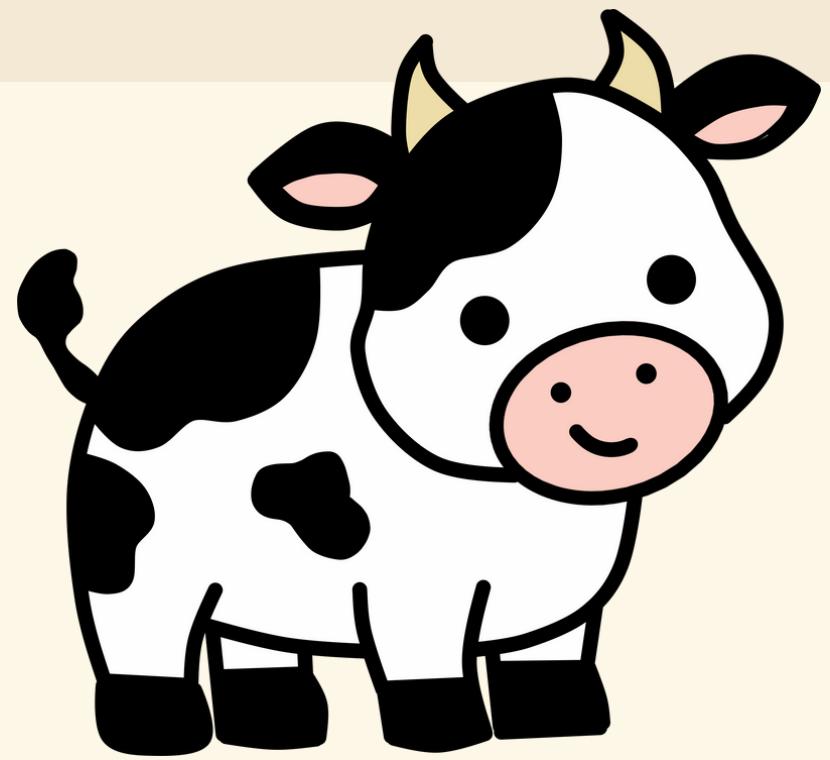
CHALLENGES & ACOMPLISHMENTS





WHAT IS THE
FUTURE FOR
SKYVET?

**THANK YOU
SO MUCH**



ANY QUESTIONS?