

# QUAD CHART

THE APPLICATION OF A SMART CAMERA USING ARTIFICIAL INTELLIGENCE (AI) IN ANIMAL HEALTHCARE

## OVERVIEW

I wanted to create an AI that could be placed onto a smart camera. This AI would be able to help farmers and animal owners to remove dangerous plants from their fields. The AI would also help identify pathogens in cultures.

## REASON

I wanted to make an easier and effective way of identifying toxic plants so animals can live safer and healthier lives. Pathogen identification could help with education as it lower cost and is portable for field-use.

## TRAINING

The model was trained on 3 pathogens commonly found in cultures: Aspergillus, E. Coli, and Bacillus Subtilis. 13 plants were chosen from a Purdue research paper focused on plants native to Indiana. These plants were chosen for their toxicity level and fatality rate.

## MATERIALS

I purchased a HUSKYLENS Camera V2 from DFROBOT. I labeled the photos in Label-Studio. I trained a YOLO V8 model made by Ultralytics.

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