# Poultry Disease Detection Using Transfer Learning

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## 1. INTRODUCTION

### 1.1 Project Overview

This project presents a deep learning-based poultry disease detection system using Transfer Learning. The system classifies poultry conditions into four categories: Coccidiosis, Salmonella, New Castle Disease, and Healthy, based on uploaded images. A lightweight Flask web application makes the solution easily accessible via mobile or desktop browsers.

### 1.2 Purpose

To help farmers, farm managers, and veterinary professionals quickly detect poultry diseases using an image-based AI system. The goal is early diagnosis, which can reduce economic loss, improve productivity, and aid in animal health management.

## 2. IDEATION PHASE

### 2.1 Problem Statement

Manual detection of poultry diseases is slow, error-prone, and often not accessible to small farmers. With the increase in poultry demand and limited veterinary access in rural regions, there's a critical need for an automated, easy-to-use disease detection system.

### 2.2 Empathy Map Canvas

SAYS: I want to know if my chickens are sick fast

THINKS: Can I trust an app to diagnose accurately?

DOES: Uploads image, checks app, starts treatment

FEELS: Frustrated by bird loss, but hopeful with tech

2.3 Brainstorming Summary

- Use MobileNetV2 for light-weight transfer learning

- Build Flask-based responsive web app

- Show disease name + treatment suggestion

- Provide Android access using WebView

... (Truncated for brevity. Will add remaining sections in next steps)