

**Problem – Solution Fit Template**

Date	20 July 2025
Team ID	LTVIP2025TMID41443
Project Name	Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management
Maximum Marks	2 Marks

**Problem – Solution Fit :****Problems**

- Difficulty in early detection of poultry diseases
- Lack of affordable and accessible veterinary support in rural areas
- High poultry mortality due to delayed diagnosis
- Economic losses from wrong or delayed treatments
- Limited awareness of disease symptoms among farmers

**Solutions**

- AI-powered image-based disease diagnosis system
- Mobile/web application for instant detection using photos
- Transfer learning enables accurate classification with limited data
- Easy-to-use interface designed for farmers
- Provides actionable treatment suggestions and disease awareness

**Problem – Solution Overview:**

Poultry farmers, especially in rural areas, face serious challenges due to the lack of early disease detection tools and affordable veterinary access. Delayed diagnosis leads to high mortality rates, economic losses, and misuse of treatments due to guesswork. Many farmers are unaware of the symptoms of common diseases like Coccidiosis, Salmonella, and Newcastle Disease, which leads to further spread and damage.

To solve this, our project introduces an AI-powered mobile and web application that uses transfer learning for accurate image-based disease classification. Farmers can simply capture a photo of a chicken and receive instant diagnosis and recommended actions. The app is built to work offline, is user-friendly, and empowers farmers with awareness, speed, and accessibility — reducing losses and improving poultry health management.

## Define customer segments, fit into customer limitations

### 1. CUSTOMER SEGMENT(S)

Add

poultry farmers are 45-85 years old, average farmer 58 years

### 6. CUSTOMER LIMITATIONS EG. BUDGET, DEVICES

Add

Customer Limitations: Limited access to smartphones

Reliable internet, and technical expertise in rural areas

### 5. AVAILABLE SOLUTIONS (PLUSES & MINUSES)

Add

Develop a low-cost

Offline-capable mobile app with simplified interfaces

To enhance accessibility for rural farmers

## Focus on problem, tap into behavior, understand root cause

### 2. PROBLEMS / PAINS + ITS FREQUENCY

Add

Delayed disease detection

Delay

Lack of veterinary access

Inaccessibility

Spread of infections

Outbreak

### 9. ROOT / CAUSE OF PROBLEM

Add

No access to diagnostic tools

Infection

No tech-based solutions

Delay

### 7. BEHAVIOR + ITS INTENSITY

Add

Manually observe chickens daily

High

Call local vet or medic

Medium

Use home remedies or guesswork

Medium-High

## Identify strong triggers & emotions

### 3. TRIGGERS

Add

Death, Symptoms, Loss, Outbreak, Urgency, Fear,

### 4. EMOTIONS

Add

Frustration, Helplessness, Stress, Fear of loss, Relief

### 10. YOUR SOLUTION

Add

Detection, Diagnosis, Accessibility, Empowerment, Speed

Automation, Intelligence, Awareness, Support

### 8. CHANNELS OF BEHAVIOR

#### ONLINE

Add

Google Search / Play Store

YouTube, WhatsApp Groups

AgriTech Apps

#### OFFLINE

Add

Local veterinary doctors, Other farmers, Poultry medicine shops