Crop Disease Detection - Interview Q&A;

1. What crops and diseases are included?

Potato leaf images with three classes: Healthy, Pest, and Fungal/Viral diseases.

2. What are image sizes?

All images resized to 224x224 pixels.

3. How will you handle resizing?

Using OpenCV and TensorFlow preprocessing.

4. What CNN architecture will you use?

Custom CNN and MobileNet.

5. Basic CNN accuracy?

Around 75–85%.

6. Data augmentation effect?

Improves model generalization.

7. Transfer learning?

MobileNet performed best.

8. K-Fold CV?

Used to validate model stability.

9. Optimizer?

Adam optimizer with lr=0.001.

10. GradCAM?

Visualizes important regions.

11. Confusion matrix?

Shows class-wise performance.

12. Dataset balancing?

Using augmentation & weights.

13. Overrepresented classes?

Healthy class dominant.

14. Stratified K-Fold?

Maintains class distribution.

15. Early detection?

Possible with clear symptoms.

16. CNN vs MobileNet?

MobileNet faster & better.

17. Preprocessing?

Normalization & resizing.

18. Dropout effect?

Reduces overfitting.

19. TTA?

Improves stability.

20. Web app?

Flask-based system.

Additional Interview Questions

• Why CNN for images?

• Explain transfer learning.

• Difference between overfitting & underfitting.

• How do you deploy ML models?

• What is batch normalization?