

Crop Disease Detection using CNN

Leaf photos diagnosed by a phone app



PRESENTED BY

Aarav Sharma · Diya Patel

GUIDED BY

Prof. R. K. Mehta

DEPARTMENT

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02 | Agenda

01

Introduction

02

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Conclusion

SECTION 01

INTRODUCTION



Crop disease identification is still
handled manually in most places —
slow, error-prone and hard to track.

Why this project matters

05 | Problem statement

01

Manual work

Crop disease identification takes hours of repetitive effort.

02

Errors

Mistakes creep in and are hard to trace.

03

No insight

Farmers and agri-officers lack data to make decisions.

06 | Objectives

- Automate the core steps of crop disease identification
- Give farmers and agri-officers a simple, mobile-friendly interface
- Store data securely and generate reports
- Evaluate the system against the existing process

SECTION 02

LITERATURE & GAP

08 | Literature survey

Study	Approach	Limitation
Study A	Rule-based automation	Not adaptive
Study B	Mobile data collection	No analytics
Commercial tools	Full-featured suites	Costly and complex

Representative summaries – replace with your own citations.

09 | Existing vs proposed system

Existing system

- ✓ Manual records
- ✓ Slow turnaround
- ✓ No reports

Proposed system

- Automated workflow
- Real-time dashboard
- One-click reports

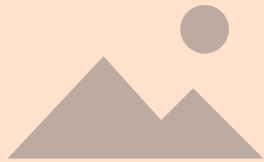
SECTION 03

PROPOSED SYSTEM

11 | System architecture

1	Input	Data captured from users or sensors
2	Process	Core logic validates and analyses
3	Store	Secure database and backups
4	Output	Dashboard, alerts and reports

12 | Block diagram



Block diagram / flowchart

Every module talks through one simple, testable interface.

The system is built in layers: an input layer, a processing service, a database and a dashboard. Each layer can be tested independently, which keeps crop disease detection using cnn simple to maintain and extend.

13 | Technology stack

01

TensorFlow

CNN model training

02

Keras

Transfer learning

03

Flask

Prediction API

04

Android

Farmer app

14 | Project timeline



15 | Implementation snapshots

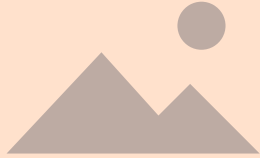


Image 1

Main dashboard

Overview of live data



Image 2

Data entry

Simple forms with validation

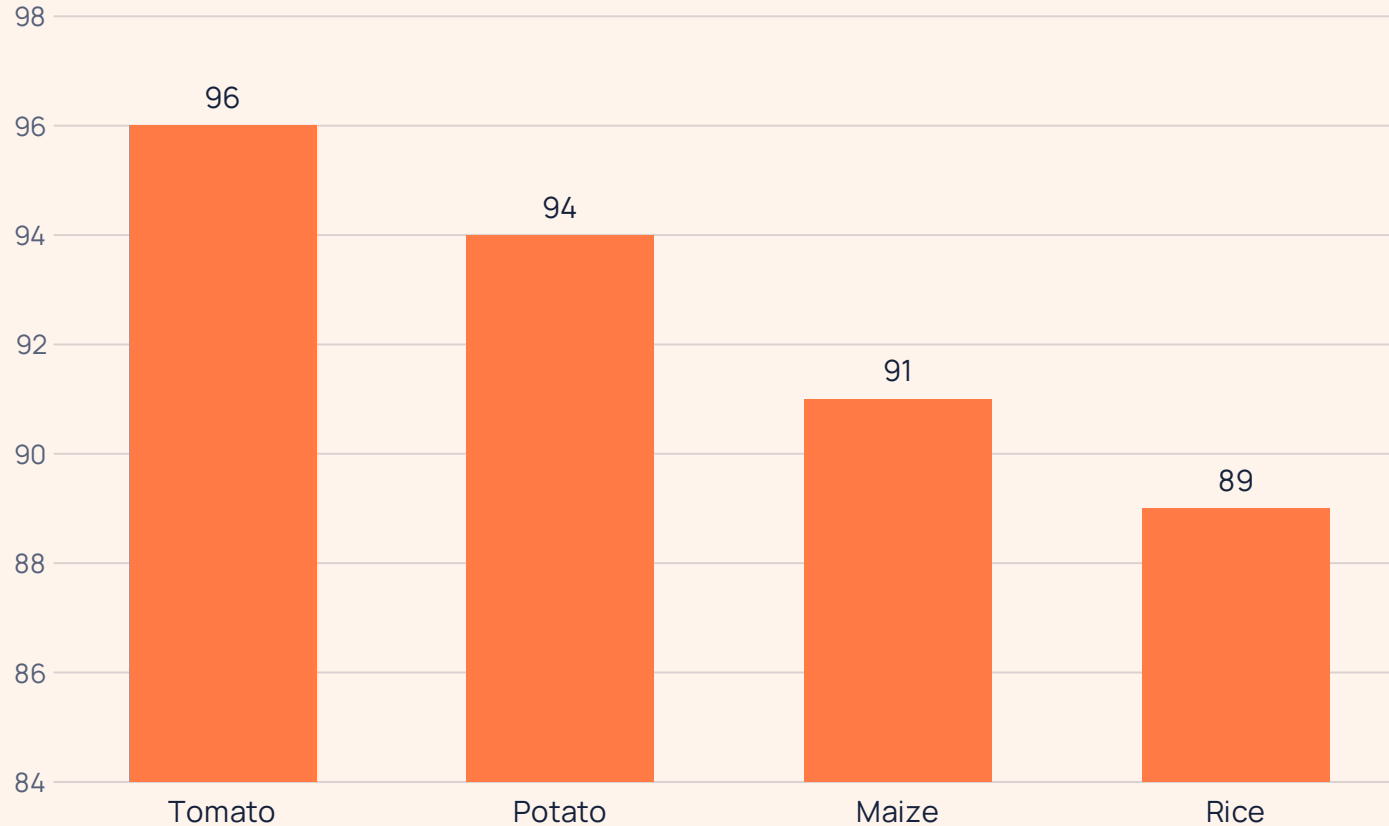


Image 3

Reports

Exportable summaries

16 | Results



Sample data for illustration – replace with your own figures.

93%
average accuracy

The prototype improved steadily over the evaluation period (sample data).

17 | Key outcomes

93%

average accuracy

100%

records digitised

< 1 s

average response

Figures from our test setup (sample data).

SECTION 04

CONCLUSION

19 | Conclusion

- Crop Disease Detection using CNN meets its main objectives
- Automation saves time and reduces errors for farmers and agri-officers
- The design is simple to extend and maintain

20 | Future scope

01

Mobile app

Native apps for Android and iOS

02

AI insights

Predictions from historical data

03

Scale-up

Deploy across more sites

21 | References

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- [2] B. Author and C. Author, Book Title, 2nd ed. Publisher, 2022.
- [3] D. Author, “Conference paper title,” in Proc. Conference, 2024.
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Thank you

Questions and suggestions are welcome.

Aarav Sharma · Diya Patel
Dept. of Computer Science

