Potato Disease Classification Using CNN Model.

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PROBLEM DEFINITION

- **Objective :** Classify Potato diseases into three classes
  - Early Blight
  - Late Blight
  - Healthy

- **Problem Statement :**

  - Potato crops are susceptible to diseases , causing significant yield losses.

  - Manual disease detection is time consuming and error prone.

  - Need for an automated , app integrated system for real time classification.
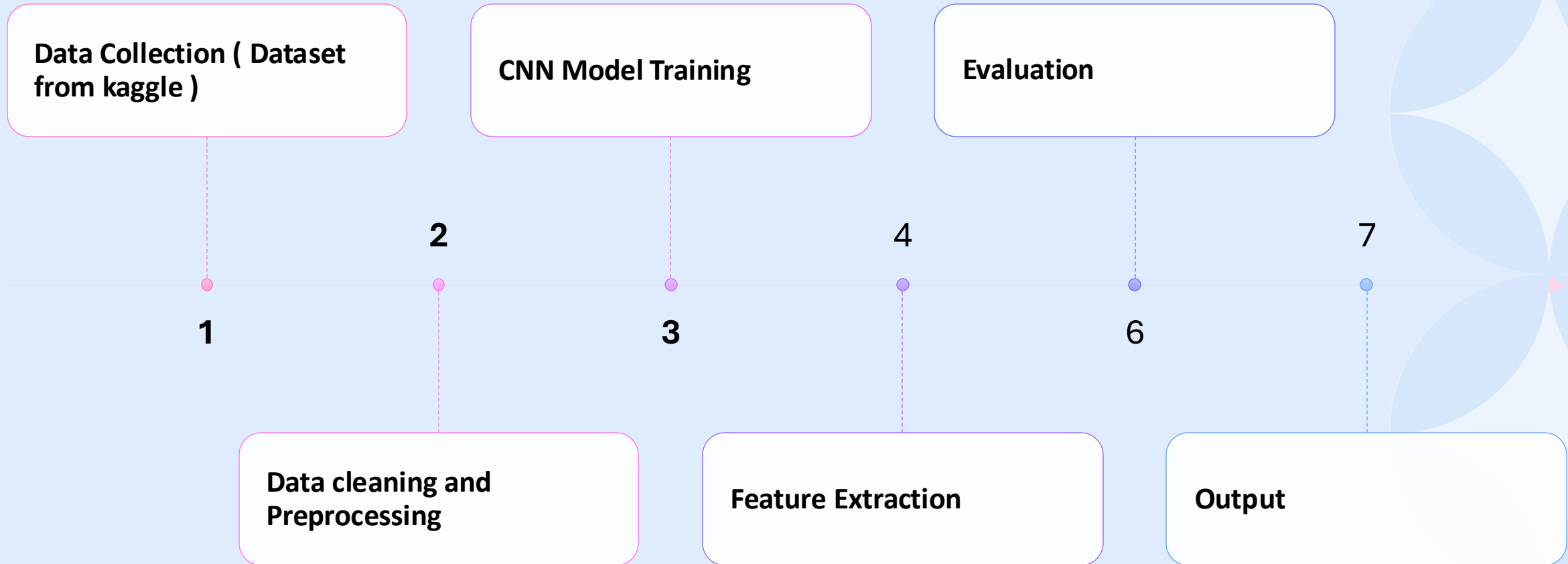
PROPOSED SOLUTION

- **Solution Overview :**

  o Use a CNN for image classification.

  o Integrated the trained model into a mobile or web application.

- **Key Features :**

  o Real time disease detection from leaf images.

  o User friendly app interface for farmers.

  o Accurate classification with minimal latency.

FLOWCHART

Data Collection (Dataset from kaggle)

CNN Model Training

Evaluation

7

2

4

7

1

3

6

Data cleaning and Preprocessing

Feature Extraction

Output

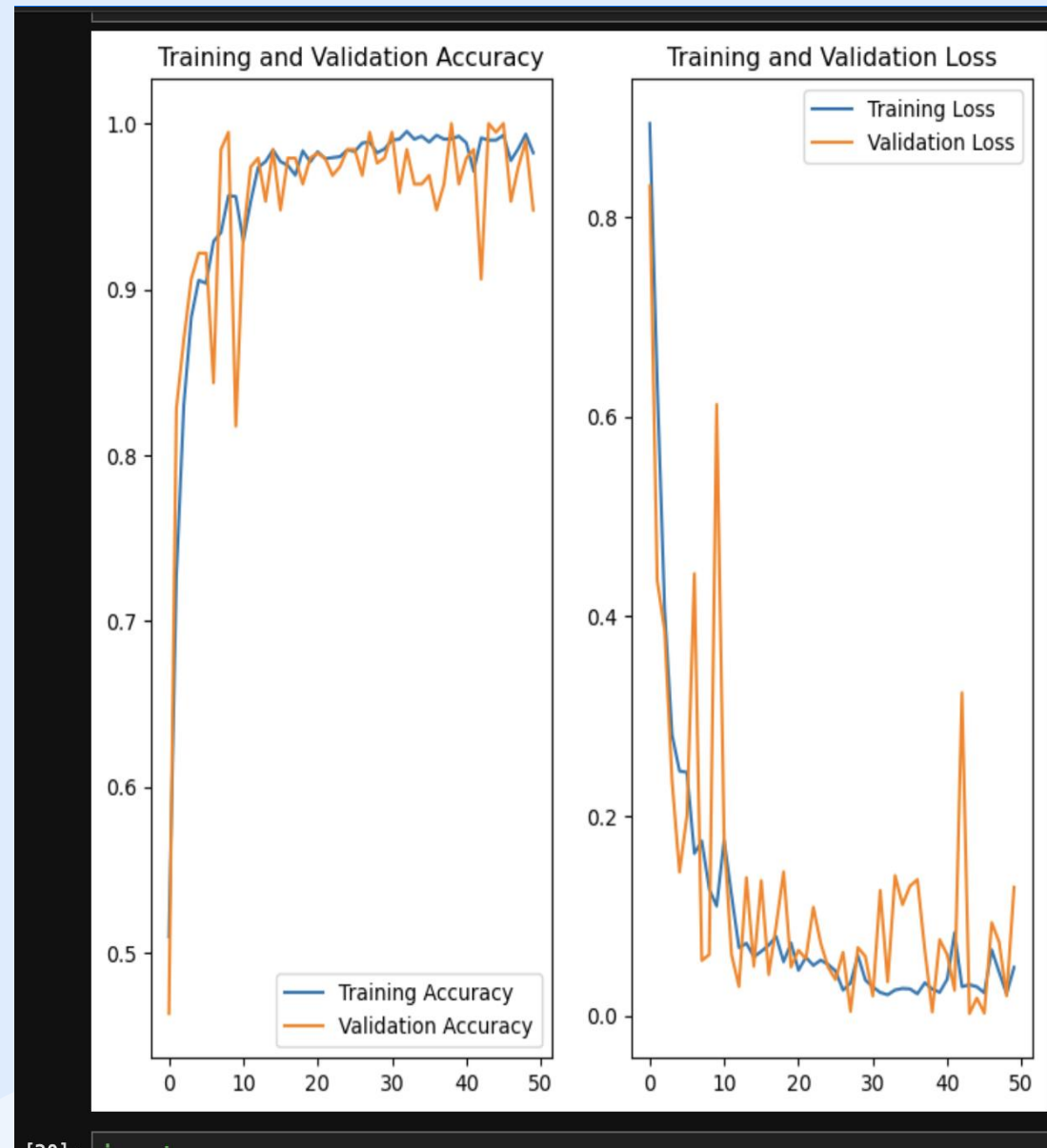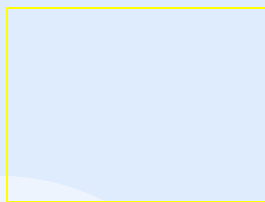# RELATED PHOTOS

Importing Library

Model Summary

Predicted Images

Accuracy

```
[22]: scores=model.evaluate(test_ds)
      6/6 ━━━━━━━━━━ 2s 163ms/step – accuracy: 0.9578 – loss: 0.1090
[24]: acc = history.history['accuracy']
```

Accuracy = 0.9578

CONCLUSION AND FUTURE WORK

- **Conclusion :**
  - Successfully classified potato diseases using a CNN model.

- **Future Work :**
  - Integrating the model into a user friendly app for farmers using FastAPI.
  - Enhance model accuracy with more diverse data.
  - Add more diseases classes.
  - Implement real time field testing.

Thank You..