LEAF DISEASE DETECTION

MY TEAM

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PROBLEM STATEMENT

An expected 70% to 80% indian economy relies on agribusiness. There is developing Indian population, which is increasingly dependent on the agricultural yield. The end goal is kept in mind to develop progressively the diseases need to be examined in earlier. Diseases are investigated utilizing different image processing techniques and diagnosed so that Farmers can overcome from yeild and financial loss.

ABSTRACT

- Plant diseases causes many significant damages and looses in crops around the world. Appropriate measures on disease identification should be introduced to prevent the problems and minimize the losses.
- Technical approaches using machine learning and computer vision are actively researched to achieve intelligence farming by early detection on plant disease.
- An application is obviously desirable to aid the farmers or garden enthusiasts in diagnosing what sorts of diseases a plant has. Although some similar applications exist, most of them achieve the function by submitting the image to a team of plant pathologists or expert garden advisers to get possible identification results and some advise.

INTRODUCTION

Leaf detection is a field of study under the image recognition field of computer vision. Recognising leaves is of utmost importance in biodiversity conservation.
The major project, detection of diseases in leaves, is also another important milestone in conserving not just biodiversity but also saving crops from disease spread.
The algorithm PCA has aided the process of leaf detection, by the monitoring of some basic features of leaves and then comparing the values obtained with the available data set.

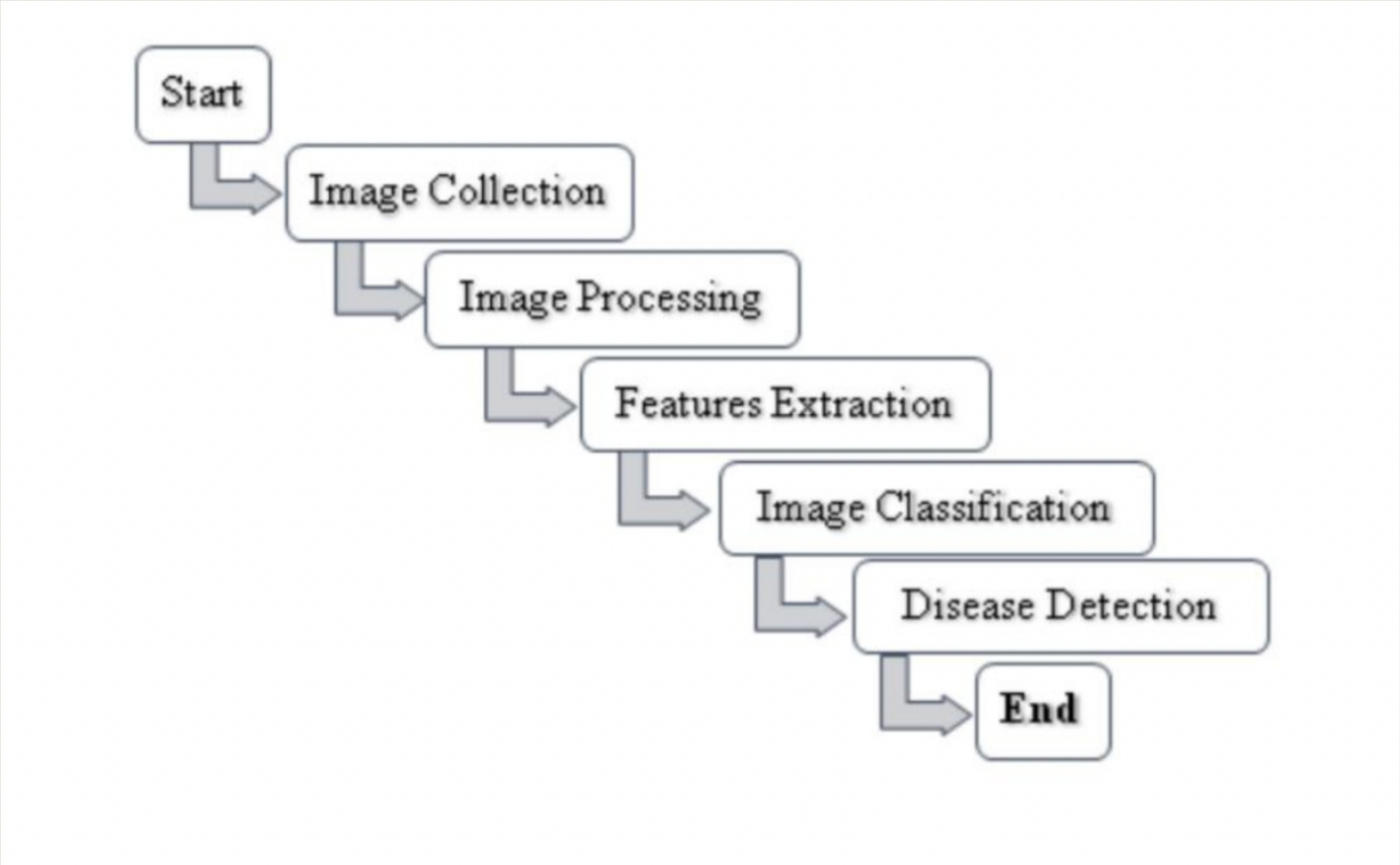
FUTURE SCOPE

- As we are developing rest full webservices for development, In future same API can be used for mobile application and web application developement.
- Currently in proposed solution "disease detection and its possible remidies" will be provided. In future development of the project with use of IoT suggested fertiliser can be automatically supplied to plant and soil.

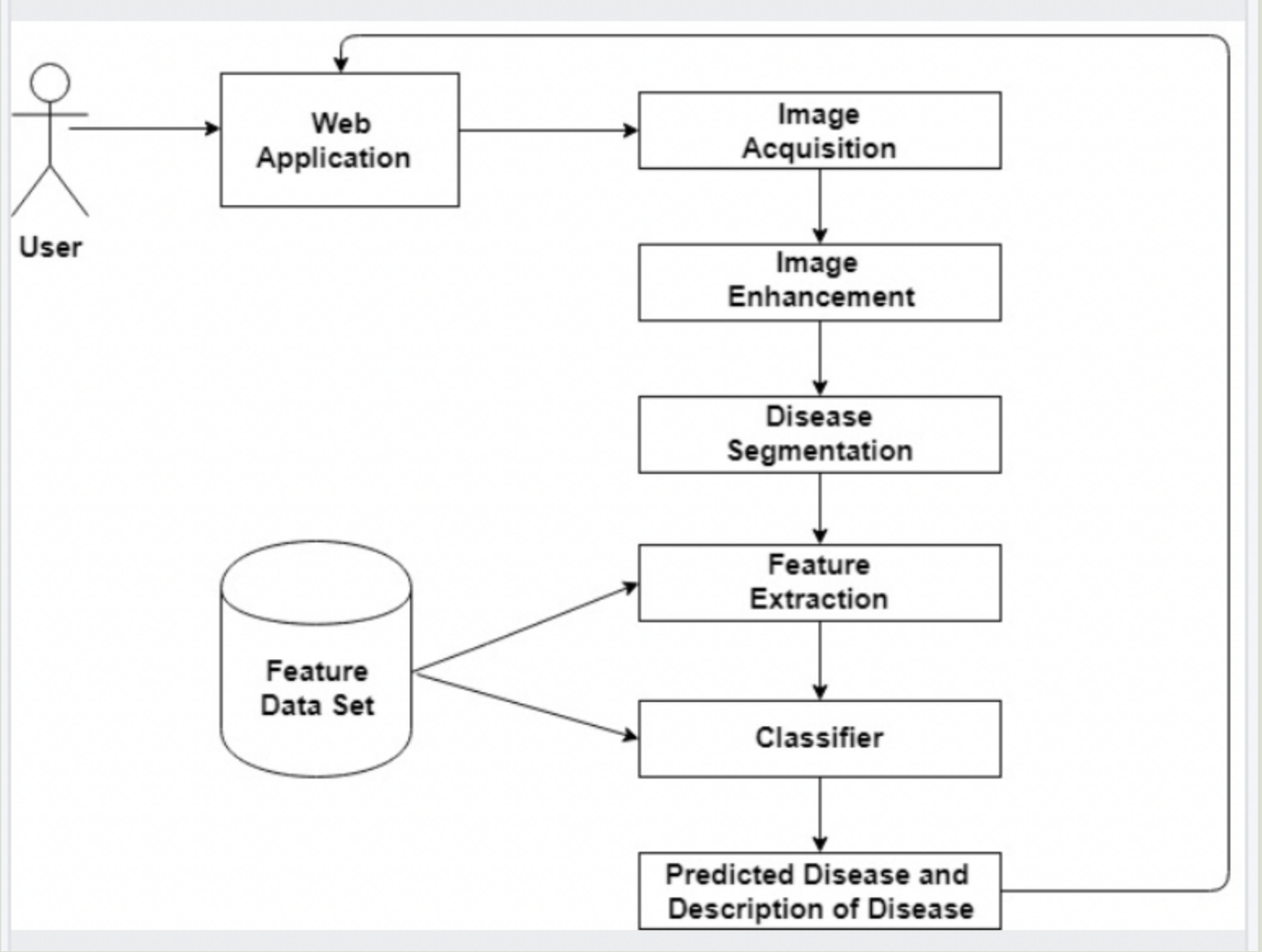
PROPOSED APPROACH

The underlying approach for all of the existing techniques of image classification is almost the same.
First, digital images are acquired from environment around the sensor using a digital camera.
Then image-processing techniques are applied to extract useful features that are necessary for further analysis of these images.
After that, several analytical discriminating techniques are used to classify the images according to the specific problem at hand.

METHODOLOGY



SYSTEM ARCHITECTURAL FLOW



CONCLUSION

The expected results of the leaf-based plant disease detection project canaccurately classify different plant disease based on their leaf images, achievinga high accuracy rate in the classification task. The model should be abletogeneralize well on unseen data and be robust to variations in leaf appearancedue to factors such as lighting conditions, background noise, and scale. Thedeployed model should also demonstrate efficient inference time and compatibility with different hardware platforms. Furthermore, the project maycontribute to biodiversity monitoring, environmental conservation, andagricultural automation by providing an accurate and reliable tool for plant disease identification.

References

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THANK YOU