

Plant Classifier and Info Retrieval

By TEAM 7

TEAM MEMBERS & CONTRIBUTIONS

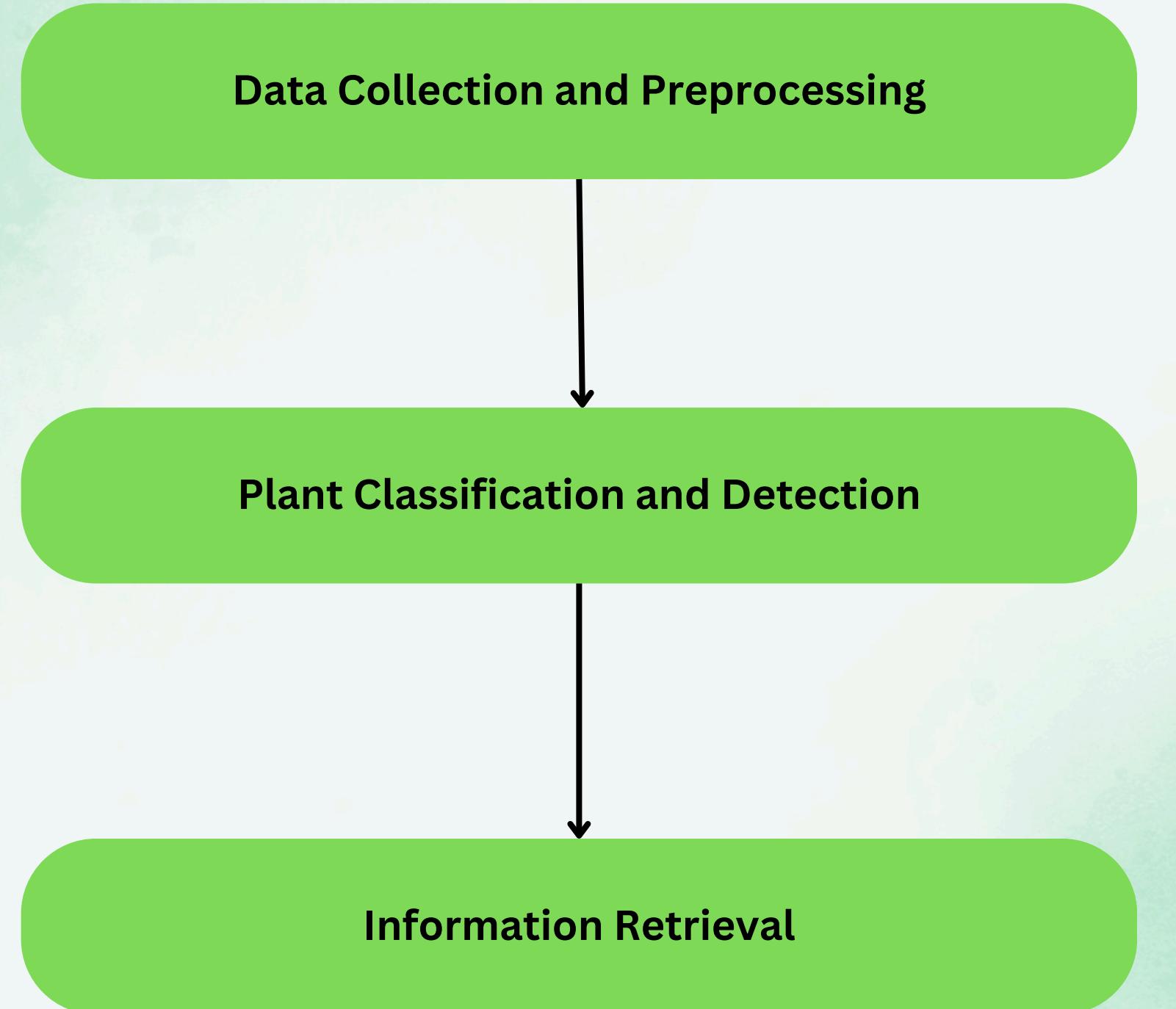
- GANTA SRUJAN(12240580) DATA COLLECTION & AUGMENTATION
- KEMASARAM NITHIN(12240780) PLANT CLASSIFICATION AND DETECTION
- B HARI CHARAN GOUD(12240360) INFORMATION RETRIEVAL

Problem Statement

The process of identifying plants by a common man has become huge task these days as there are numerous rare and unknown plants existing to tackle this problem we came up with a Plant Classifier and Information Retrieval Model which also gives info about the plant you need.



WORKFLOW



DATA COLLECTION

1.

Approximately 20 kinds of plants are used in the process. 7-10 leaves from each plant are taken and photos were taken of both sides of the leaf.

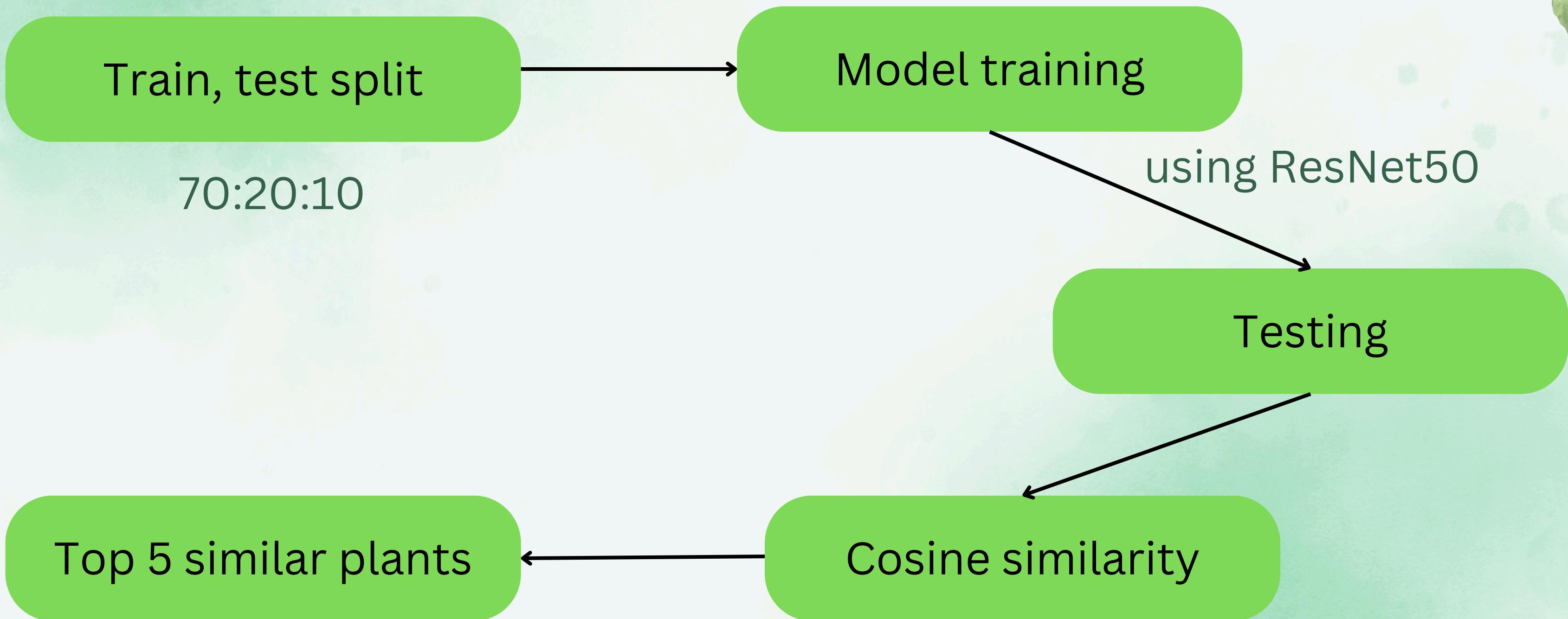
2.

A white paper is placed under the leaf to ensure that there are no other things in the images which increases the accuracy of the model.

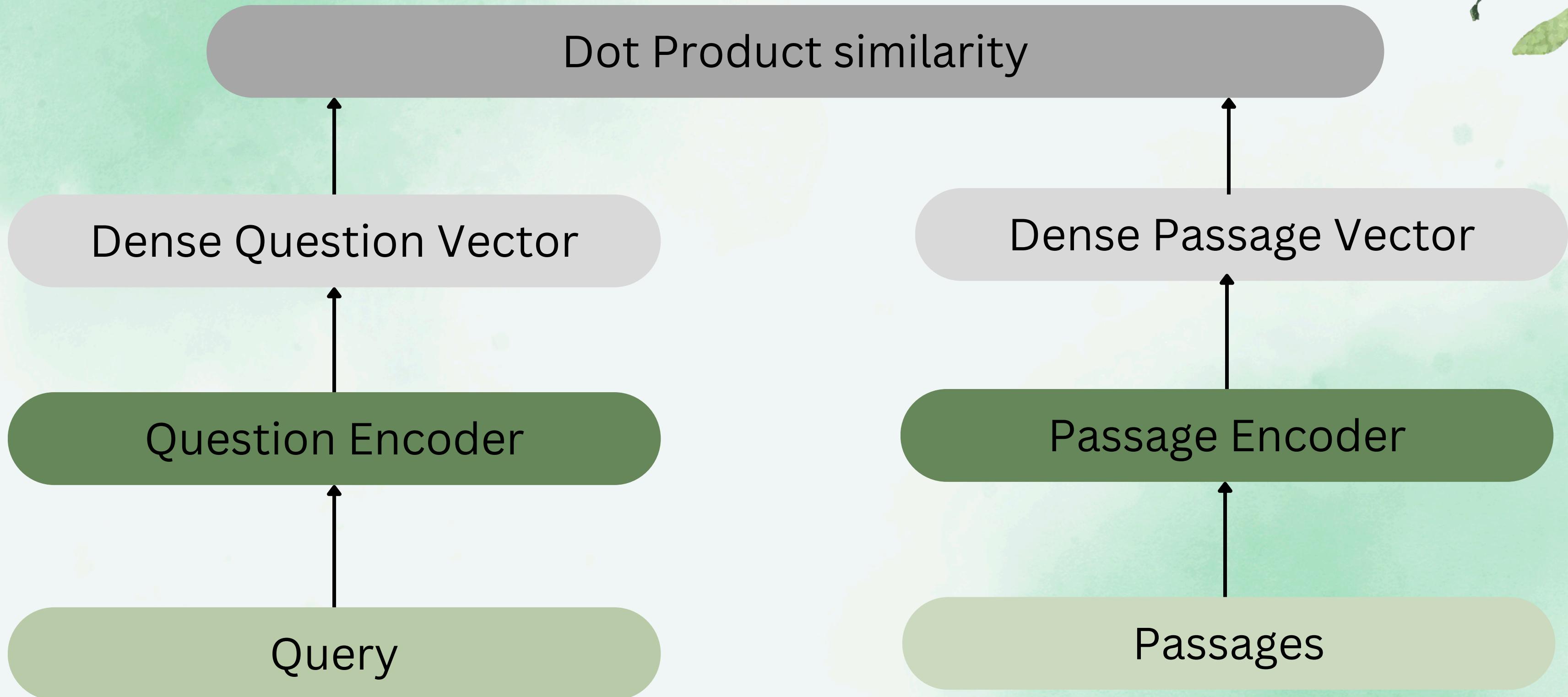
DATA AUGMENTATION

To enhance the diversity and size of the dataset we did augmentation on each leaf. Each image gets generated into 5 new images where the image is flipped, rotated, added noise, added blur and change in brightness and contrast.

Plant Classification and detection



Information Retrieval



Results

Plant classification:

Train accuracy	Test accuracy
95.95%	94.49%

Top 5 similar plants to betel:

- 1) Betel
- 2) Clove
- 3) Ixora Coccinea
- 4) Hydrangea
- 5) Centella asiatica

Relevant Information for Hydrangea:

Family: genus of more than 70 species of flowering plants native to Asia and the Americas

Description: *alaskana* is a fossil species recovered from Paleogene strata at Jaw Mountain Alaska.

Uses: Hydrangeas are popular ornamental plants, grown for their large flowerheads, with *Hydrangea macrophylla* being by far the most widely grown.

**Thank
You**