

Report

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Project1: Flower Identifier

<https://eep500dminiproject-dycsybrmadwedqq2fsfzym.streamlit.app/>


Flower Identifier

Please upload a flower image

Upload a Picture

 Drag and drop file here
Limit 200MB per file • PNG, JPG, JPEG

Browse files

 rose.png 9.9MB ×



We implemented this project together. Daqian Yao mainly contributed to the chatgpt prompt part, Mazzy Chen mainly contributed to the images generation part, and Jiajun Lu mainly contributed to the nearest neighbors generation part.

Through this project, we learned how to utilize different models to generate multiple types of material and implement image classifier. The biggest problem we encounter in this project is to find out the most appropriate model. We used vit-base-patch16 at first, however, we can't get three nearest neighbors through this model, so we turn to clip-vit-base-patch32, which we used to successfully generate three nearest neighbors images. Through this problem, we realized that picking the rightest model is the essential part in machine learning implementation.

Project2: Flower Hopper

<https://eep500dminiproject-yilu4ccfjdz7zkqf4ghgyg.streamlit.app/>

(This app is taking too much memory, may crush sometimes)

Flower Hopper

Enter the names of two flowers to find the shortest path

Flower A

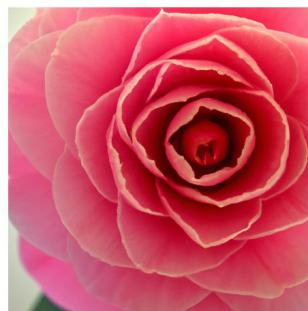
rose

Flower B

tulip



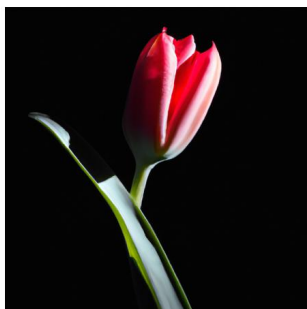
images/88 Rose



images/25 Camellia



images/86 Ranunculus



images/95 Tulip

We implemented this project together. Daqian Yao mainly contributed to the embedding part, Mazzy Chen and Jiajun Lu mainly contributed to the find shortest path part.

The problem we encountered in this project is to find the shortest path between input and output images. We wasted so much time on it and even implement a Dijkstra's Algorithm instead of using the module to solve the problem. From this project, we learned that using GPU and python module can save a lot of time in machine learning implementation.