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Flower Image Recognition Project

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# OVERVIEW

This project team is comprised of Brock Kanjicai, Ahmed Lotfy and Shanker Nair. We propose to carry out an image recognition project with a flowers dataset with around 4000 different images of flowers across multiple species/classes.

# DATA SOURCES

1. Dataset download page

[*https://storage.googleapis.com/download.tensorflow.org/example\_images/flower\_photos.tgz*](https://storage.googleapis.com/download.tensorflow.org/example_images/flower_photos.tgz)

1. Dataset main page

[*https://www.tensorflow.org/datasets/catalog/tf\_flowers*](https://www.tensorflow.org/datasets/catalog/tf_flowers)

1. *Technical paper explainign the logic used in the analysis*

# *Nilsback, M-E. and Zisserman, A. Automated flower classification over a large number of classes.*

# *Proceedings of the Indian Conference on Computer Vision, Graphics and Image Processing (2008)*

# TASK BREAKDOWN

Machine Learning Model

1. Use python pandas to create a machine learning model to train the dataset of flowers.
2. Carry out the necessary tasks to make the model predict the flower category with
   1. Test dataset; (b) Validation dataset; (b) Test dataset
3. Generate an api endpoint route for the project
4. Optional: Recommendation of closest flower based on the current prediction

Creating the front-end API and visulaization

1. Create a basic HTML/CSS layout to display the project
2. Create the required routes and JavaScript necessary to connect to the front end

Creating the Heroku connection

1. Once the app deploys successfully, work on the Heroku deployment.

Testing the ML model in the front end

1. Deploy and test the front end interface with random images of flowers for prediction.