MIDTERM PROJECT PROGRESS PRESENTATION

Dept of IT
Subject Code: PROJ-IT781
By
Group No : 5

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Cassava Leaf Disease Prediction and Classification

Objective

- Classify each cassava image into four disease categories or a fifth category indicating a healthy leaf.

- With this, farmers may be able to quickly identify diseased plants, potentially saving their crops before they inflict irreparable damage.
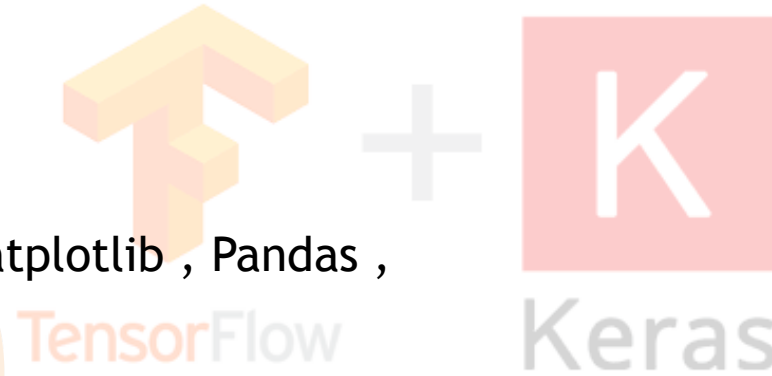
Tech Stack

Frontend:
HTML5 ,CSS3, JavaScript.

Backend:
Python, Flask , Tensorflow/Keras , Matplotlib , Pandas , Numpy , Scikit learn
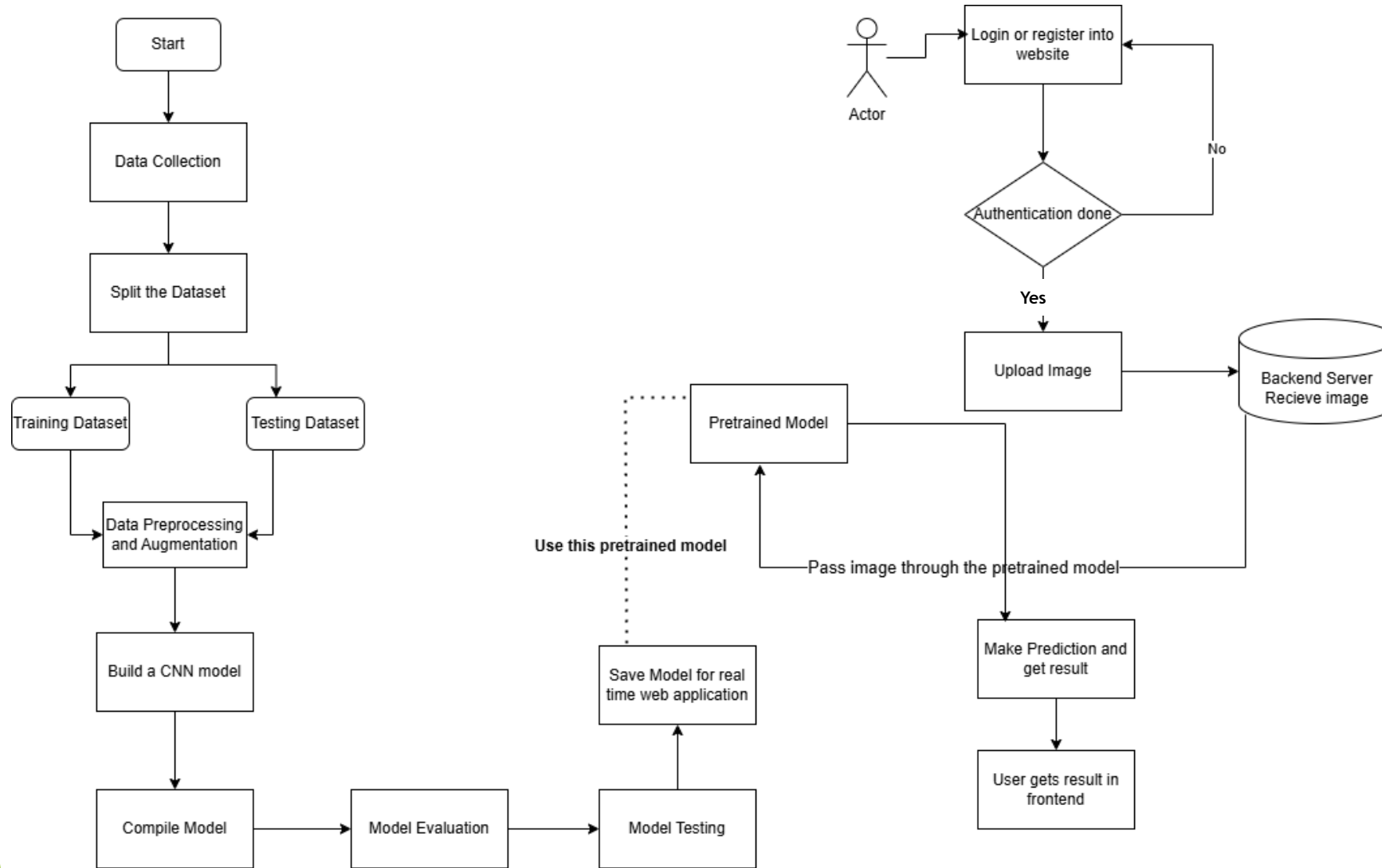
Database:
Firebase Realtime Database

Deployment:
Heroku , Amazon AWS EC2 , Google Cloud

Architecture

Progress Till Date

1. Collection of image data from the web which consists of 21367 images

2. Preprocessing the dataset.

3. Training the model.

4. Prediction on a new image using the model

Results

The model is able to predict and classify the disease from the image provided to it with an validation accuracy of 70.83%

The directory of the image is to be provided to the prediction function and it provides the prediction and classification of the image along with the image displayed.

```
Epoch 10/10
534/534 ───────────────── 1s 526us/step - accuracy: 0.8750 - loss: 0.4956 - val_accuracy: 0.7083 - val_loss: 0.9092
```


Predicted: Healthy

Predicted: Cassava Bacterial Blight (CBB)

Predicted: Cassava Mosaic Disease (CMD)

Future Scope

1. Creating an interactive user interface where a user can upload an image and the prediction would be displayed.

2. Trying to increase the accuracy of the model by optimization .

3. Primarily trying to check whether the image is indeed a cassava leaf or any other leaf.

4. Deployment of the web app on a Cloud Platform like AWS etc.

THANK YOU