

Landmark Recognition

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Problem Statement

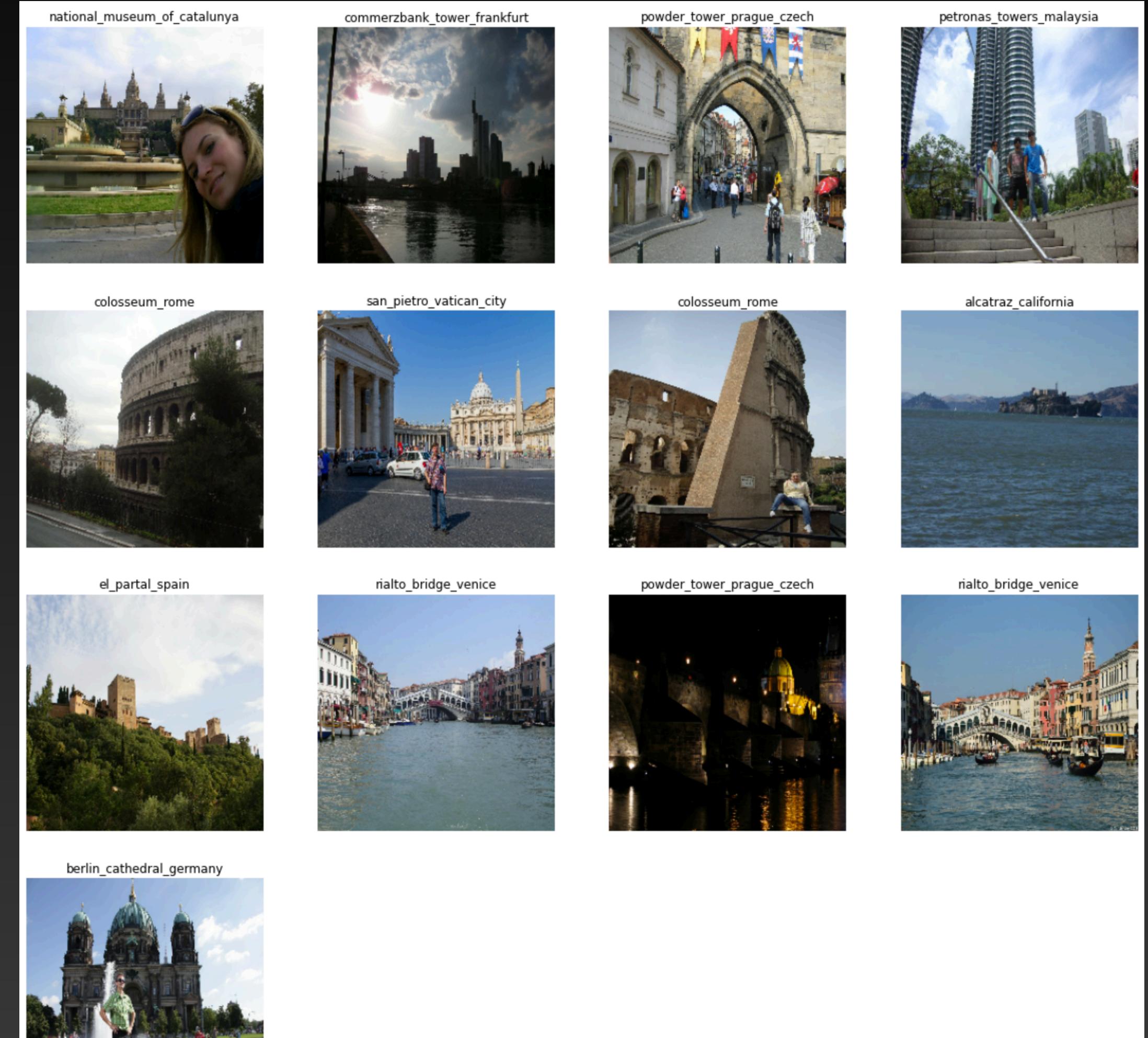
Find the landmarks in vacation pictures

Workflow

- Examine and understand data
- Build an input
- Build the model
- Train the model
- Test the model
- Improve the model

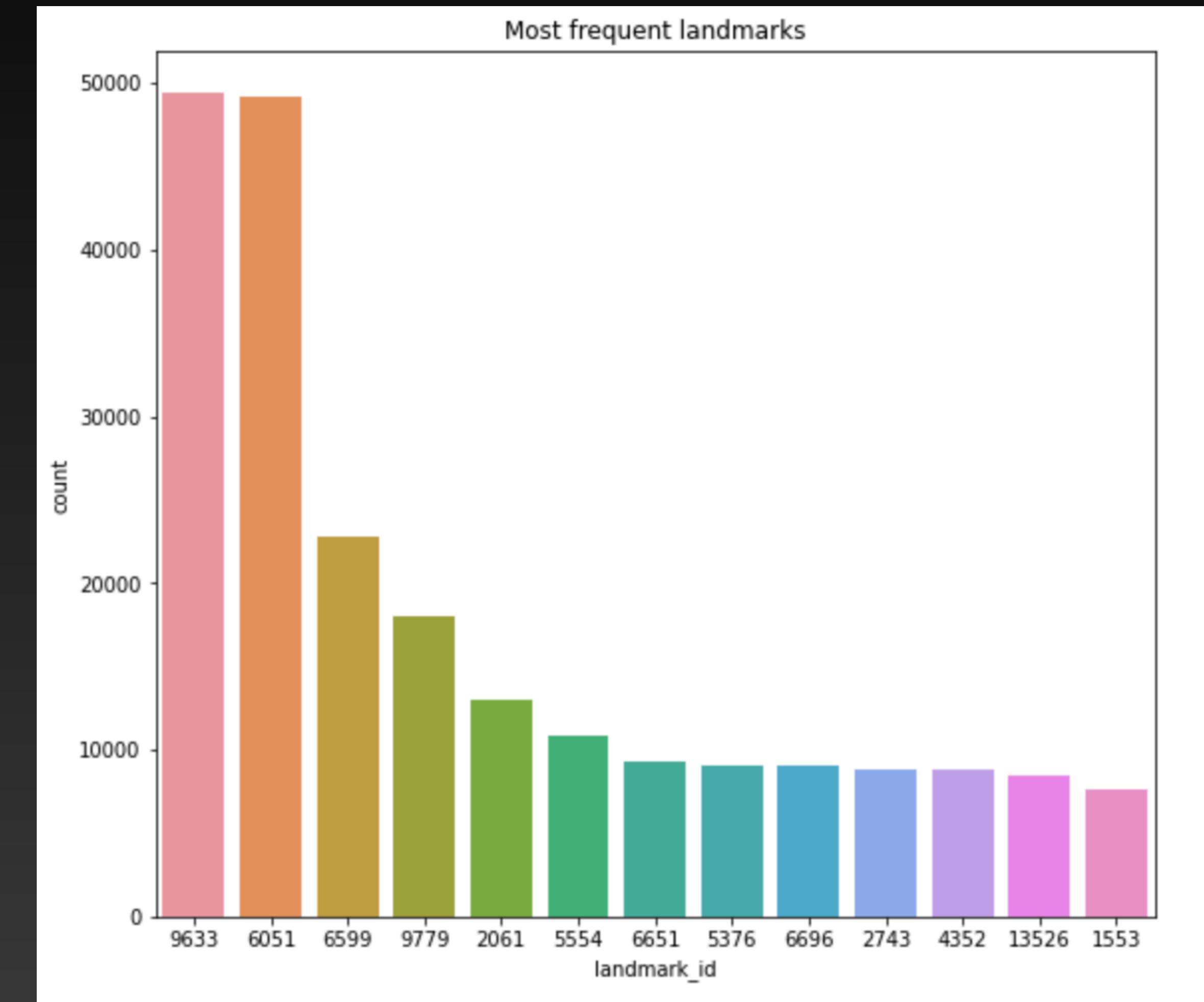
Exploring the Data

- Downloaded Landmark Images from Google - Landmarks Dataset from Kaggle.
- Data Cleaning(Data Preparation) - 34362 rows
- Unique Landmarks - 14946



Build an Input

- Top 13 Most Frequent Landmarks
- Training Data = 1600 images
- Testing Data = 400 images



Create the model

Without using any Transfer Learning

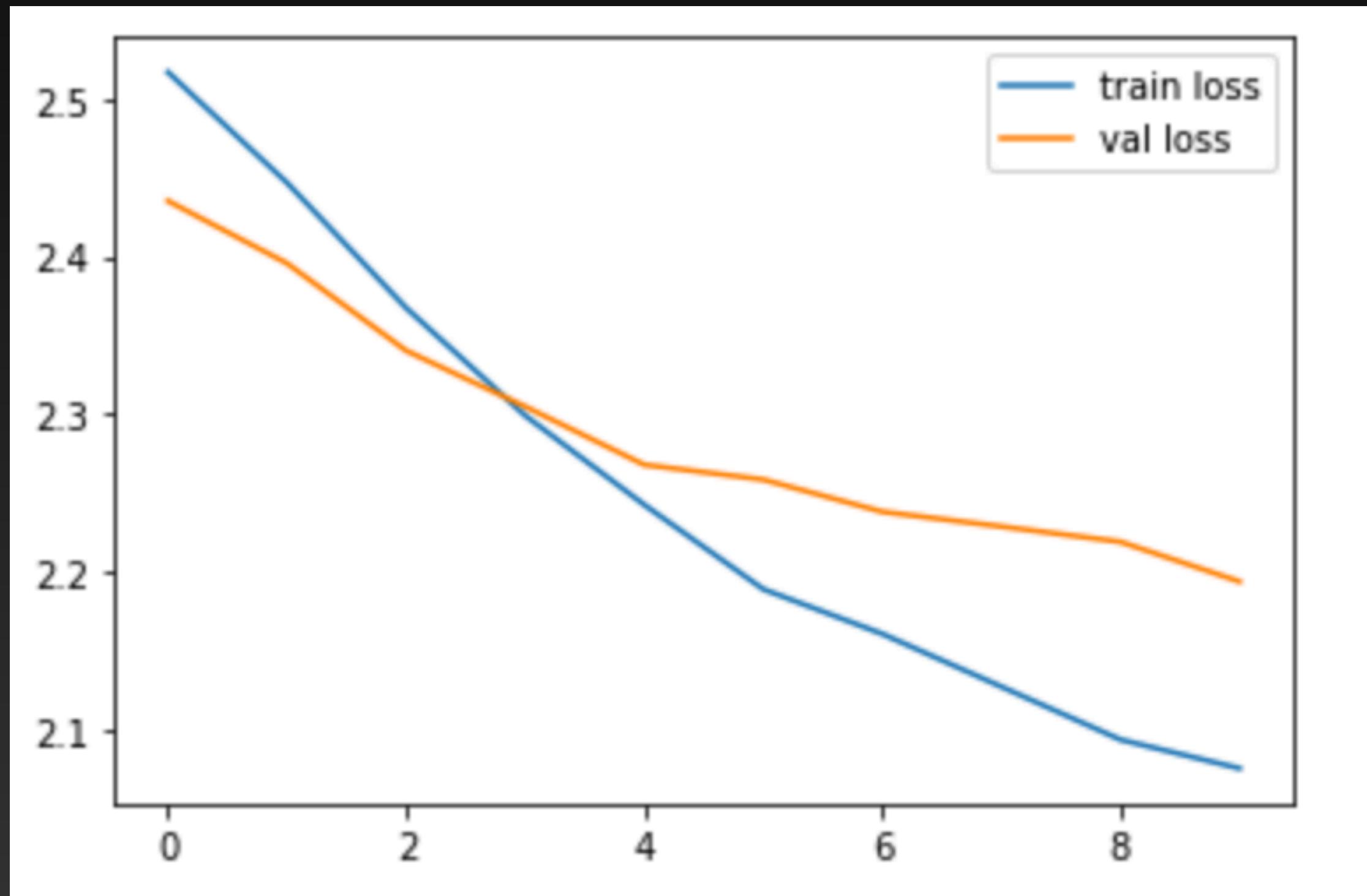
- Three convolution blocks with a max pool layer in each of them
- Two hidden layers.

With Transfer Learning to build the model

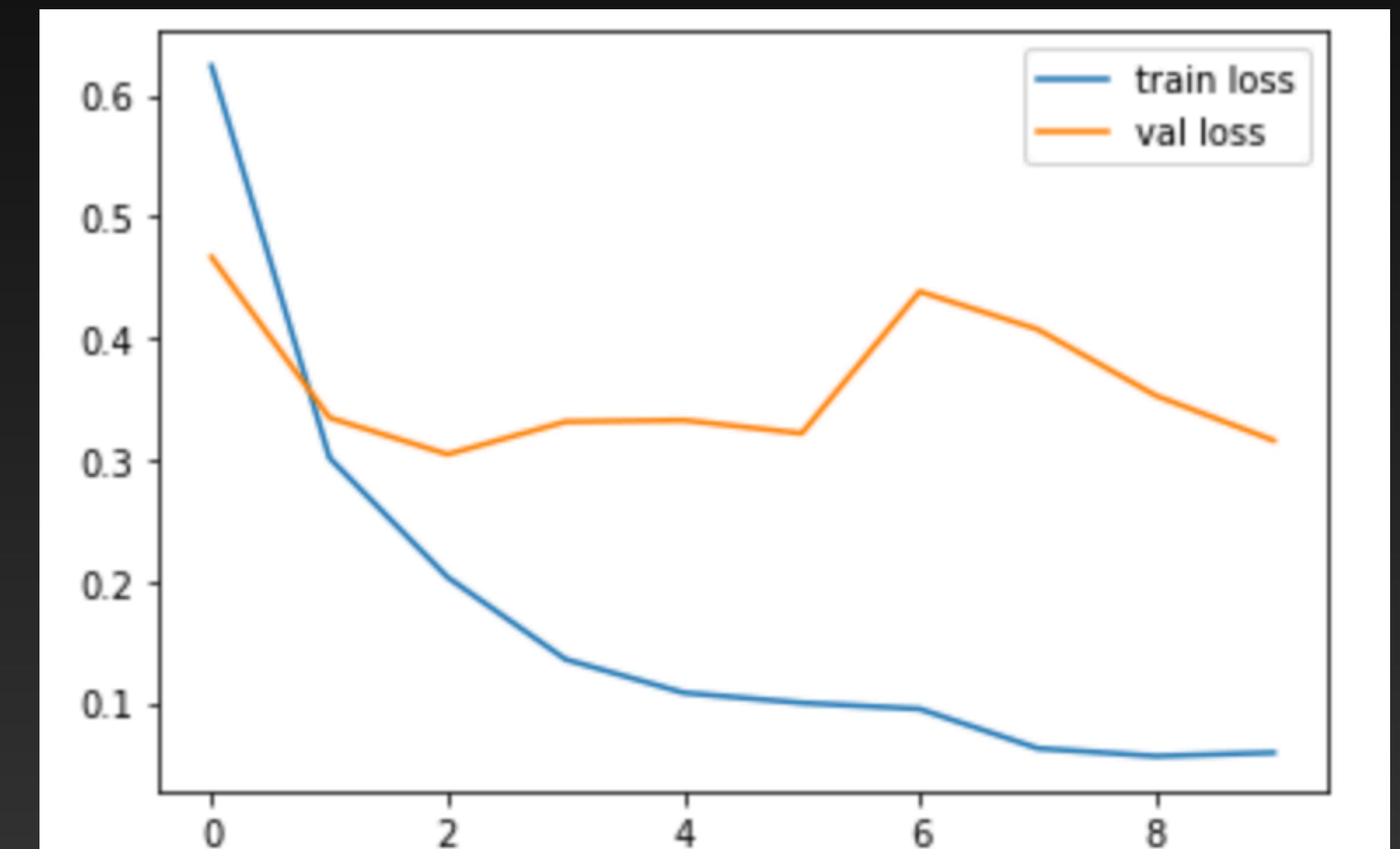
- ResNet50 - 23 million parameters.
- Load in the pre-trained base model (and pre-trained weights).
- Stack the classification layers on top.

Training the model(Loss)

Without Transfer Learning

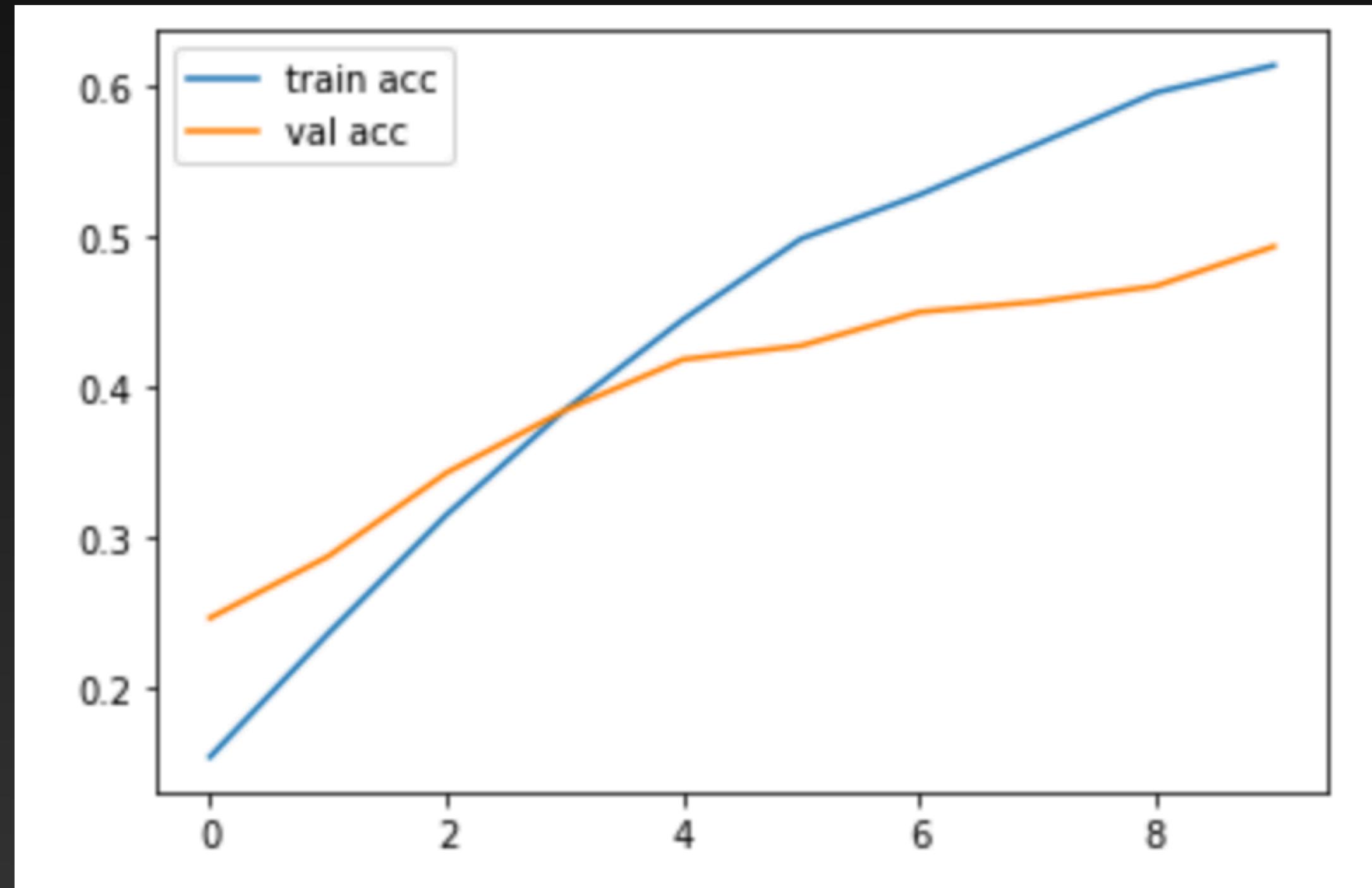


With Transfer Learning

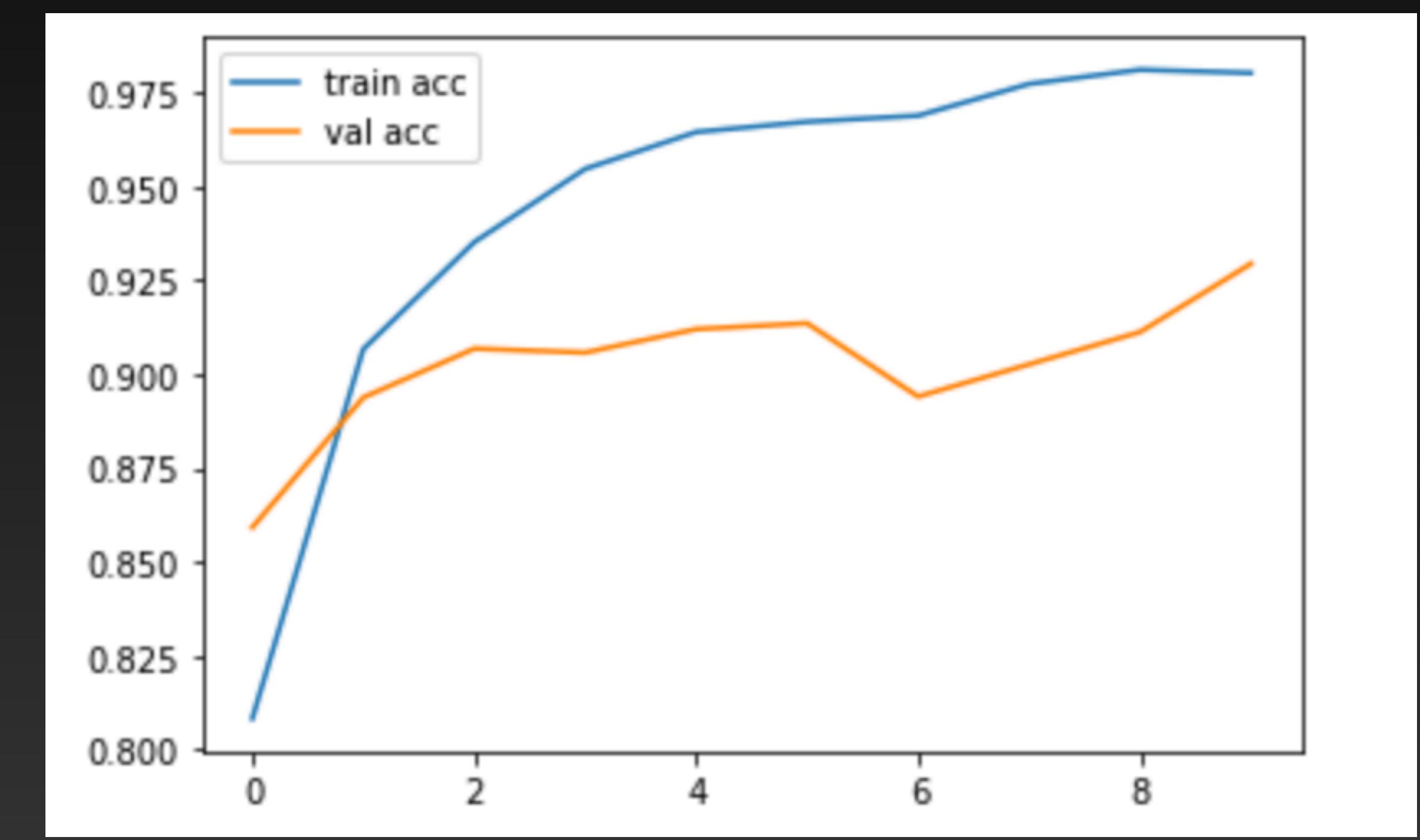


Training the model(Accuracy)

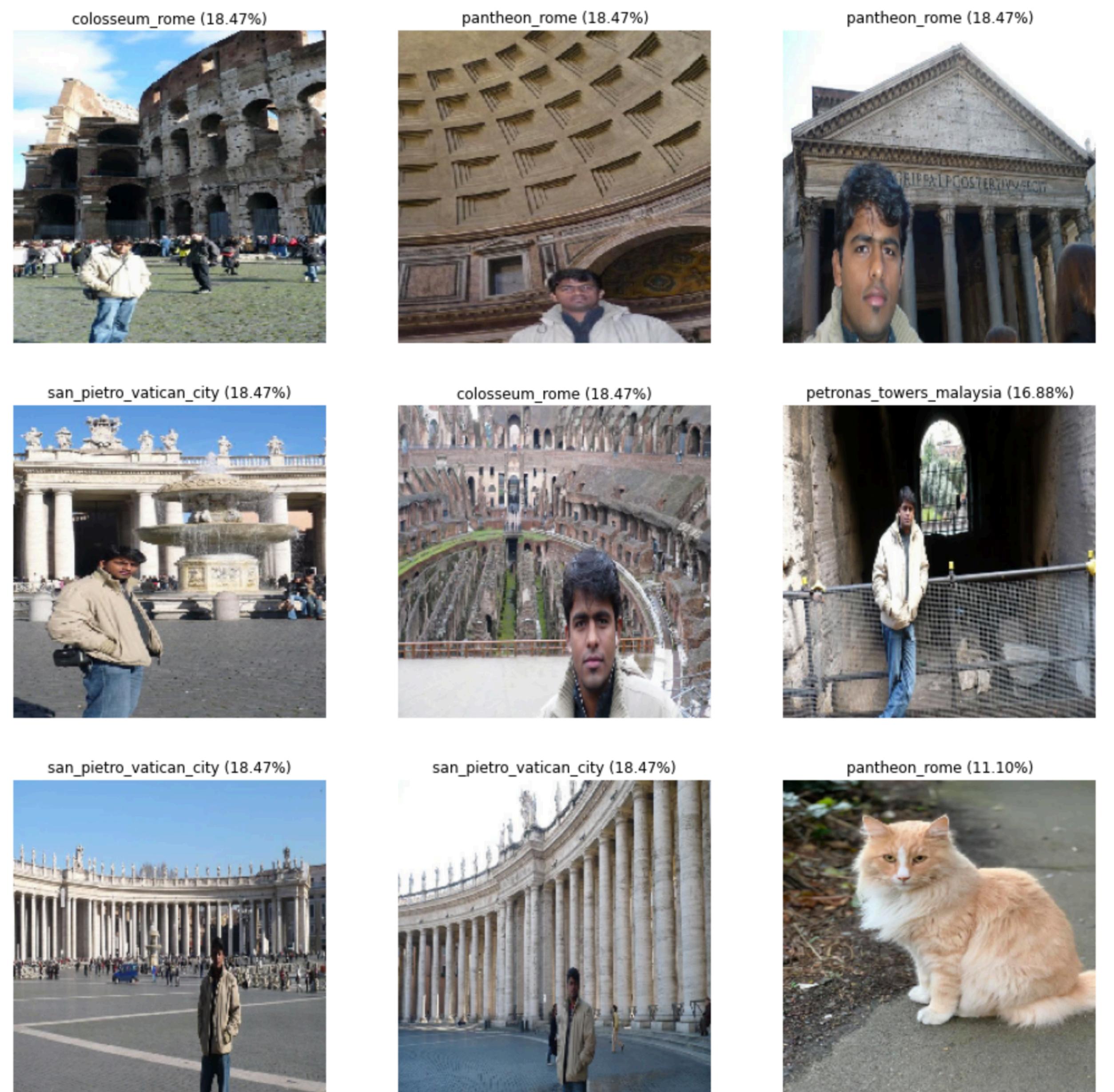
Without Transfer Learning



With Transfer Learning



Testing the model



Demo

Improve the Model

- Confidence level for predictions are less
- Test the accuracy of the model using my test dataset.
- Only picked 13 landmarks due to my limitations, but want to expand the list.

Thank you

Any Questions?