

# MODEL BUILDING

## TESTING THE MODEL:

```
#testing the model
testingpath=list(paths.list_images(testingpath))
idxs=np.arange(0,len(testingpath))
idxs=np.random.choice(idxs,size=(25,),replace=False)
images=[]
```

✓ 0.3s

```
#loop over the testing samples
for i in idxs:
    image=cv2.imread(testingpath[i])
    output=image.copy()

    # load the input image,convert to grayscale and resize

    output=cv2.resize(output,(128,128))
    image=cv2.cvtColor(image,cv2.COLOR_BGR2GRAY)
    image=cv2.resize(image,(200,200))
    image=cv2.threshold(image,0,255,cv2.THRESH_BINARY_INV | cv2.THRESH_OTSU)[1]

    #quantify the image and make predictions based on the extracted feature using last trained random forest
    features=quantify_image(image)
    preds=model.predict([features])
    label=le.inverse_transform(preds)[0]
    #the set of output images
    if label=="healthy":
        color=(0,255,0)
    else:
        color=(0,0,255)

    cv2.putText(output,label,(3,20),cv2.FONT_HERSHEY_SIMPLEX,0.5,color,2)
    images.append(output)
```

✓ 0.4s