Code:

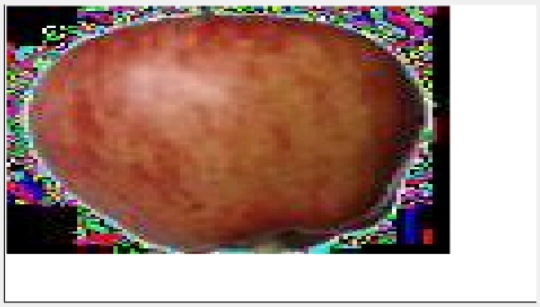
```
function browseimage(app, event)
            global I;

[filename,filepath]=uigetfile({'*.*;*.jpg;*.png;*.bmp;*.oct'},'select file to
open');
            image=[filepath,filename];
            I=imread(image);
            imagesc(app.UIAxes,I);
end

function training(app, event)

imds=imageDatastore("FileExchange/fruit-classification-with-cnn-and-transfer-
learning-1.1.0/Yeni/meyve/",...
                "IncludeSubfolders",true,...
                'LabelSource','foldernames');
            [train,test]=splitEachLabel(imds,0.8,'randomized');
            countEachLabel(train);
            cellsize=[4 4];
            n=numel(train.Files);
            for i=1:n
                img=readimage(train,i);
                img=im2gray(img);
                img=imbinarize(img);
                trainfeat(i,:)=extractHOGFeatures(img,'CellSize',cellsize);
            end
            trainlabels=train.Labels;
            global classifier;
            classifier=fitcnet(trainfeat,trainlabels);
end
       % Button pushed function: predictButton
function prediction(app, event)
            global I;
            global classifier;
            I=im2gray(I);
            I=imbinarize(I);
            feat=extractHOGFeatures(I,'cellSize',[4 4]);
            label=predict(classifier,feat);
            app.predictionEditField.Value=char(label);
 end
```

MATLAB App

# FRUIT/VEGETABLE CLASSIFIER

browse

**input image**



train

predict

prediction Apple