```
% Define the path to the image directory
dataDir = '/MATLAB Drive/chest_xray_21';
imds = imageDatastore(dataDir, "IncludeSubfolders", true, 'LabelSource',
'foldernames');

num_classes=2;

% Load the pre-trained VGG-16 model
net = vgg16;
layers = net.Layers;

% Modify the network for transfer learning
layers(end-2) = fullyConnectedLayer(2);
layers(end) = classificationLayer;

% Set the training options
options = trainingOptions('sgdm', ...
    'MiniBatchSize', 32, ...
    'MaxEpochs', 10, ...
    'InitialLearnRate', 0.001, ...
    'Verbose', true, ...
    'Plots', 'training-progress');

% Define the input image size for the network
inputSize = [224 224 3];


% Set the image augmentation options
augmenter = imageDataAugmenter( ...
    'RandXReflection', true, ...
    'RandRotation', [-20 20], ...
    'RandXTranslation', [-10 10], ...
    'RandYTranslation', [-10 10]);

% Create an augmented image datastore
augimds = augmentedImageDatastore([224,224], imds, ...
    'DataAugmentation', augmenter, ...
    'ColorPreprocessing', 'gray2rgb');

% Train the network
net = trainNetwork(augimds, layers, options);
```

```
Training on single CPU.
Initializing input data normalization.
|=========================================================================================|
|  Epoch  |  Iteration  |  Time Elapsed  |  Mini-batch  |  Mini-batch  |  Base Learning  |
|         |             |   (hh:mm:ss)   |   Accuracy   |     Loss     |      Rate       |
|=========================================================================================|
|       1 |           1 |       00:00:05 |       66.67% |       0.9637 |          0.0010 |
|      10 |          10 |       00:00:24 |       33.33% |       1.2153 |          0.0010 |
|=========================================================================================|
Training finished: Max epochs completed.
```

```
```

```
Unrecognized function or variable 'git'.
```

```
```