**Transfer Learning Function Summary**

**Create a network**

| **Function** | **Description** |
| --- | --- |
| [alexnet](http://www.mathworks.com/help/nnet/ref/alexnet.html) | Load pretrained network “AlexNet” |
| [supported networks](https://www.mathworks.com/solutions/deep-learning/models.html) | View list of available pretrained networks |
| [fullyConnectedLayer](https://www.mathworks.com/help/nnet/ref/nnet.cnn.layer.fullyconnectedlayer.html) | Create new fully connected network layer |
| [classificationLayer](http://www.mathworks.com/help/nnet/ref/classificationlayer.html) | Create new output layer for a classification network |

**Get training images**

| **Function** | **Description** |
| --- | --- |
| [imageDatastore](http://www.mathworks.com/help/matlab/ref/matlab.io.datastore.imagedatastore.html) | Create datastore reference to image files |
| [augmentedImageDatastore](https://www.mathworks.com/help/deeplearning/ref/augmentedimagedatastore.html) | Preprocess a collection of image files |
| [splitEachLabel](http://www.mathworks.com/help/matlab/ref/datastore.spliteachlabel.html) | Divide datastore into multiple datastores |

**Set training algorithm options**

| **Function** | **Description** |
| --- | --- |
| [trainingOptions](http://www.mathworks.com/help/nnet/ref/trainingoptions.html) | Create variable containing training algorithm options |

**Perform training**

| **Function** | **Description** |
| --- | --- |
| [trainNetwork](http://www.mathworks.com/help/nnet/ref/trainnetwork.html) | Perform training |

**Use trained network to perform classifications**

| **Function** | **Description** |
| --- | --- |
| [classify](https://www.mathworks.com/help/nnet/ref/classify.html) | Obtain trained network's classifications of input images |

**Evaluate trained network**

| **Function** | **Description** |
| --- | --- |
| [nnz](http://www.mathworks.com/help/matlab/ref/nnz.html) | Count non-zero elements in an array |
| [confusionchart](http://www.mathworks.com/help/nnet/ref/confusionchart.html) | Calculate confusion matrix |
| [heatmap](http://www.mathworks.com/help/matlab/ref/heatmap.html) | Visualize confusion matrix as a heatmap |