Performing Regression

Training a regression network

Regression refers to assigning continuous response values to data, instead of discrete classes. Like with classification, you can train a regression network with the `trainNetwork` function.

If you are performing transfer learning from a pretrained network, do the following:

1. Launch the Deep Network Designer from the toolstrip or with `deepNetworkDesigner`
2. Replace the `fullyConnectedLayer` (**Convolution and Fully Connected**)
3. Delete the softmax layer and the classification layer
4. Add a `regressionLayer` (**Output**)

Evaluating a regression network

Instead of calculating accuracy or misclassications, you can calculate the root-mean-square error (RMSE).

To find the error for one image, you can just find the difference between the known value and the predicted value.

To find the error for multiple images, calculate RMSE.

```
pred =
predict(mynet,testImage);
err = trueValue - pred;

rmse = sqrt(sum(err.^2));
```