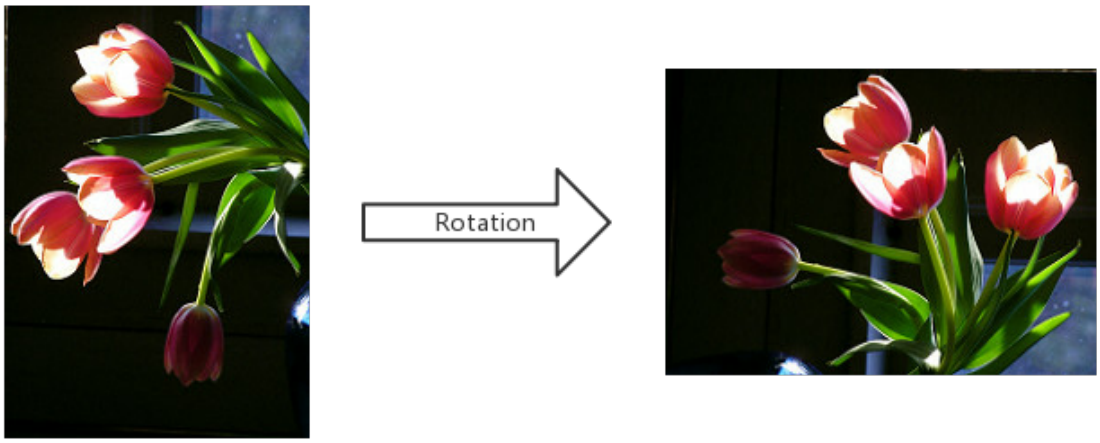
Data pre-processing

Since the input of the deep model must have the same size, some image pre-processing is necessary.

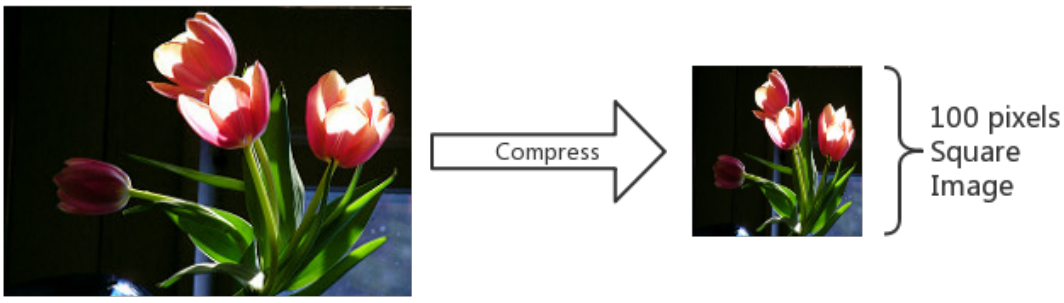
STEP 1 : Image Rotation

To ensure the images have similar aspect ratio, the image is rotated if the height is larger than the width.



STEP 2 : Image compression

In this step, the image is compressed to have same size.



Build the deep model

The deep model I choose is Convolutional Neural Network.

After the pre-processing, the images have an uniform size (width=100, height=100, channel=3). So the input layer size is (100, 100, 3). Then the hidden layers are consist of 3 pairwise convolutional and polling layers. The last layer is dense layer with a 0.4 drop out rate. Then the output is put into a softmax classifier. The output of the softmax classifier is the class label.

Here is the illustration of my model :