

# Deep Learning Lab Course 2016 (Deep Learning Practical)

**Labs:**  
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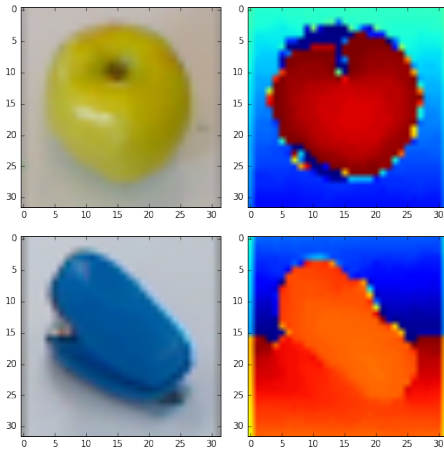
## Exercise 2

### RGB-D image classification

- ▶ Your second exercise is to train a CNN for the RGB-D dataset in tensorflow!
- ▶ We prepared code for loading the data and including some hints:  
[https://github.com/mlldfreiburg/dl\\_lab\\_2016](https://github.com/mlldfreiburg/dl_lab_2016)
- ▶ If you need additional info regarding tensorflow look at the tutorials:  
<https://www.tensorflow.org/versions/r0.11/tutorials/index.html>
- ▶ You can use the pool computers, tensorflow is installed and they have a modern GPU
- ▶ Hand in the exercise by **Monday 28.11** again via mail

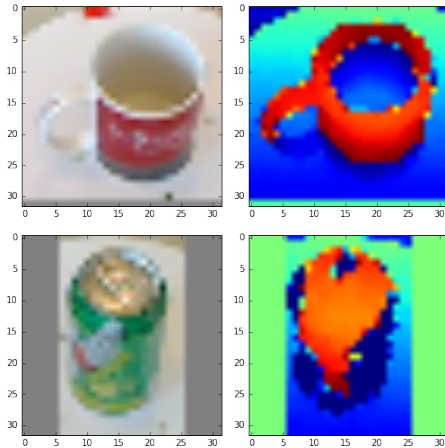
## Exercise 2

- The images for the second exercise look like this:



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Requirements regarding your solution:

- ▶ Implement a CNN network and training in tensorflow
- ▶ train and compare at least two different architectures
  - use only the validation set for comparisons
- ▶ train with and without the depth channel and compare your results
  - does the depth information help here ?
- ▶ Write a one page report including your comparison in a table/figures
  - Hint: it is sometimes also interesting to look at which images the classifier gets right/wrong