University of Salzburg — Lecturer: Roland Kwitt

Computer Vision – Proseminar (911.909)

Exercise sheet E (Jan. 02, 2017) — Hand-in by **Jan. 12, 2017**

Logistic Regression as a Feedforward NN

Exercise 1. 20 P.

Implement a **logistic regression** classifier as a feed-forward neural network in `TORCH`.

First, select a simple two-class problem in 3-D, *or* create a synthetic dataset on your own. *Note*: the dataset should have at least 1000 data points and obviously 2 different labels.

Second, write a script `train.lua` to train the classifier using mini-batches (select an appropriate batch size) and use ADAM as an optimizer. Save the trained classifier to disk.

Third, write a script `test.lua` to load the classifier and test it with another 1000 data points.

Hand-in **two** files: (1) `train.lua` and (2) `test.lua`. The first script should load the first part of the data and train the classifier; the second script should load the remaining data points + the saved model and report the classification accuracy.

Do NOT copy/paste any GitHub examples.

Total #points: 20 P.