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Part1 – RNN acceptor:

The model:

To this task we created training and dev sets, using gen_examples: training – 500 samples of each, dev – 100 samples of each.

The model we built is composed of embedding layer, RNN, one fc layer, and sigmoid.

The model should be able to distinguish between pos and neg samples, because the difference between them is the inner order, and an RNN takes it into account.

Our experience:

The model indeed made great job: it reached accuracy of 100% after only 2 epochs (in some runs 3-4), on both train and dev, and even on test we made to be sure (100 brand new samples of each). The learning took 32 seconds.
at the beginning, although the learning was always in one huge jump, the jump came after 4-6 epochs, it improved when we defined large enough embedding dim (50).

We also observed that the results on train and dev sets were almost identical, which is expected because this is a binary classification, there is one simple difference between the two classes, and the samples came from identical Distribution. The results are so close that in some runs the train curve completely disappeared.

Results graphs: