Report2

Refael Shaked Greenfeld 305030868,

Danit Yshaayahu 312434269

A description of the languages.

- Why did you think the language will be hard to distinguish?
- _ Did you manage to fail the LSTM acceptor? (including, train and test set sizes, how many iterations did you train for, did it manage to learn the train but did not generalize well to the test, or did it fail also on train?

Language 1

A language which is a palindrome for a positive example and a negative example was a concatenation of the same array of characters.

It is hard for a LSTM to remember from a certain length 30 epochs.

Yes, it did fail on it (50% on test data).

Although it manage to learn the training data with an 100% after 20 ephochs

Language 2

Sum of digits to 100 and in the other hand the negative example was the digits sum to 105. We believesd it has to do with more than a memory of sequence to know if a set of dufgut sum to 100 or any other number, and vbecause they are reltlivy close, it also doent have the signal of length.

Yes, it did fail on it, it mamnage to have 54% in dev and 30 epochs.

Although it manage to learn the training data and get 100% on it

Language 3

Does a language divide by 3 or not. Both binary representation and both decimal representation.

It has to fail because each vector, represent it self on one hand but the label is for the all sequence as one number.

It failed both on the test and both of the train with 50% each