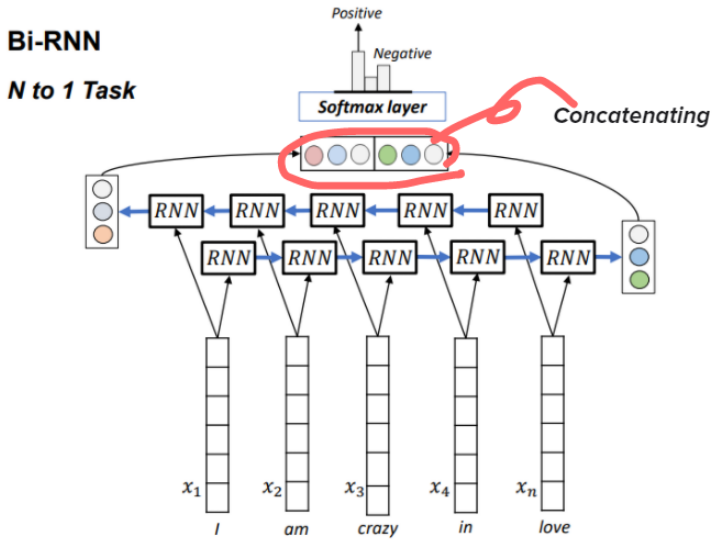
Lecture 5 Q&A

30 March 2021

How can we stack two bi-direction output?

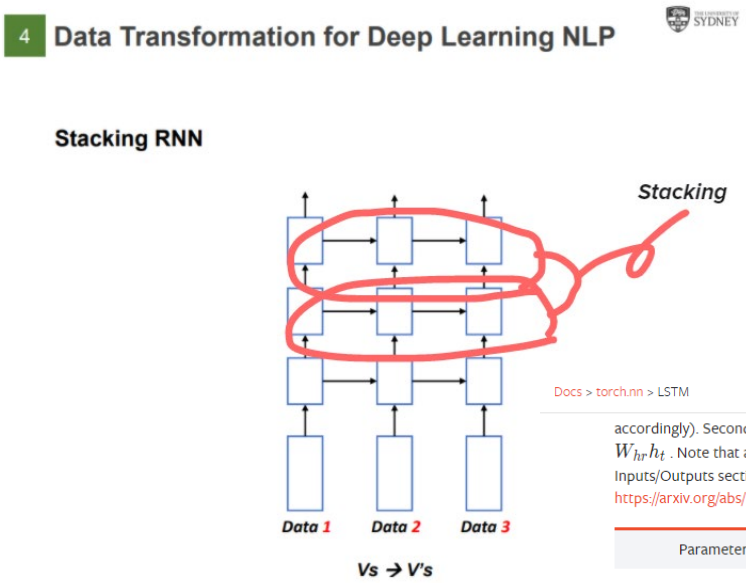
Beware to use the term "Stack". as there is a "Stack RNN or LSTM" when we stack two or more layers on top of each layer.



Concatenating?

It means stacking end to end rather than on top of one another

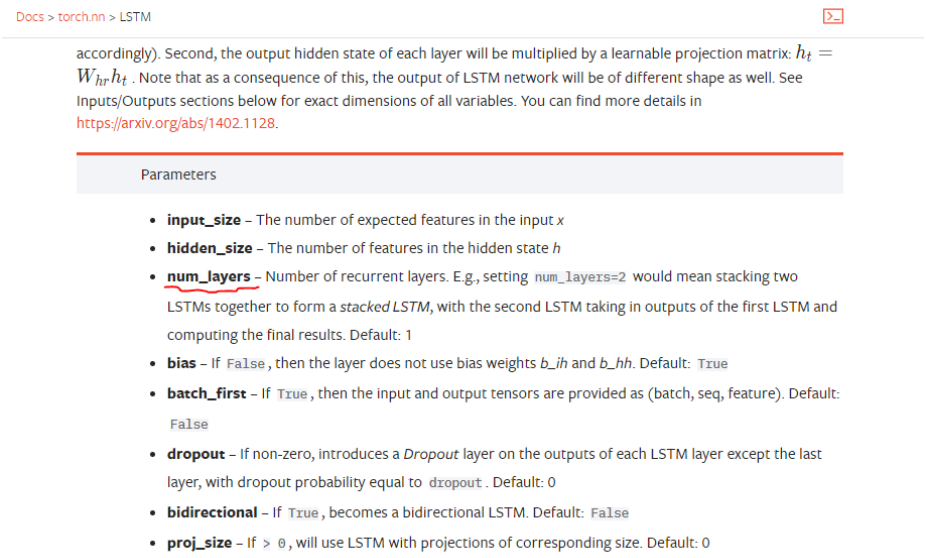
For example, concatenate [x1,x2,x3], and [x4,x5,x6] ⇒ [x1,x,2,x3,x4,x5,x6]



Stacking?

Generally stacked LSTM or RNN refers to multiple layers (on top of each layer).

In Pytorch, you can simply define this in your model definition or RNN or LSTM layer has parameter called "num_layers". You can specify how many layers you want to stack by using this "num_layers" parameter.



LSTM — PyTorch 1.8.1 documentation

What if a word has different meaning in different situation? (lexicons)

How would you control for changes in language over time? E.g. if you were doing a sentiment analysis of newspaper articles over the last century.

That is very interesting about language. This problem causes that using same embedding for different time period may not be appropriate.

There is a specific word embedding for this purpose, that you will learn later this unit. It is called "ELMO" (Contextual Landuage Embedding)

Yes, that ELMO. Want to know more? wait for later lecture or read the paper → [1802.05365] Deep contextualized word representations (arxiv.org)