Ask or Search Quora

Ask Question

Read

Answer

Notifications

Mages

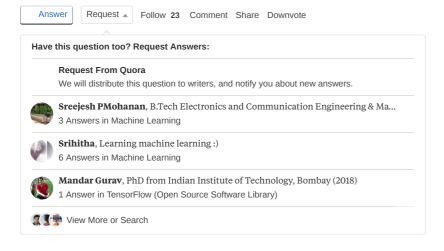
Long short-term memory (LSTM) +3

What is the meaning of "The number of units in the LSTM cell?

From Tensorflow code:

num units: int, The number of units in the LSTM cell.

Can't get what does this mean. What are the units of LSTM cell? Gates? Does this mean "number of units in the recurrent projection layer for Deep LSTM"? That is other thing...



Promoted by Udacity.com IN

Launch a career in artificial intelligence today.

Get your Machine Learning Engineer Nanodegree in this course, co-created by Google.

Learn More at Udacity.com

3 Answers



Mostafa Samir, Independently resareshing AI, while using TensorFlow Written Jul 24, 2016

An LSTM keeps two pieces of information as it propagates through time:

- A **hidden state**; which is the memory the LSTM accumulates using its (forget, input, and output) gates through time, and
- The previous time-step output.

Tensorflow's num_units is the size of the LSTM's hidden state (which is also the size of the output if no projection is used). To make the name *num_units* more intuitive, you can think of it as the number of hidden *units* in the LSTM cell, or the number of memory *units* in the cell.

2.6k Views · View Upvotes





Hieu Pham, Has done some machine learning

Written Jul 28, 2016 · Upvoted by Matthew Li, PhD Natural Language Processing & Machine Learning (2017)

LSTM is by definition, a function F: $\mathbb{R}^d \times \mathbb{R} \times \mathbb{R}^d \to \mathbb{R}^d \times \mathbb{R}^d$. It takes in $x, p_c, p_b \in \mathbb{R}^d$ and performs the following computations:

Related Questions

What is in the cell state in an LSTM? What information does it contain?

How is the hidden state (h) different from the memory (c) in an LSTM cell?

What the difference between an LSTM memory cell and an LSTM layer?

What is the difference between the cell state and cell state in LSTM?

To what extent does the dimension of LSTM hidden states affect performance?

When is it good to use 2 or more LSTM blocks in one layer?

What is the meaning of 'projection layer' in Istm?

Is one LSTM block better then more LSTM blocks?

What does it mean for LSTM to be multilayer?

How does LSTM network learn to use a reset gate?

More Related Questions

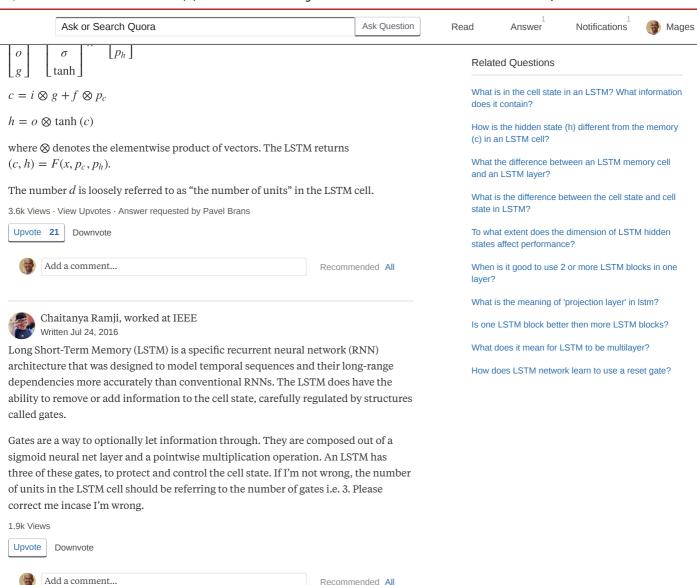
Question Stats

23 Followers

8,486 Views

Last Asked Nov 11

Edits



Top Stories from Your Feed

