

Ruby trunk - Feature #14116

Add Matrix #exponentiate method as Matlab's exp

11/19/2017 08:11 PM - greggzst (Grzegorz Jakubiak)

Status:	Feedback
Priority:	Normal
Assignee:	marcandre (Marc-Andre Lafortune)
Target version:	
Description	
Add exponentiate method which results in returning a new matrix with each element being an exponent of the number e. Here is PR for that: https://github.com/ruby/ruby/pull/1762	

History

#1 - 11/19/2017 08:38 PM - greggzst (Grzegorz Jakubiak)

- Description updated

#2 - 11/19/2017 09:10 PM - greggzst (Grzegorz Jakubiak)

- Subject changed from Add Matrix #exponentiate method to Add Matrix #exponentiate method as Matlab's exp

#3 - 11/20/2017 02:31 AM - marcandre (Marc-Andre Lafortune)

- Assignee set to marcandre (Marc-Andre Lafortune)

- Status changed from Open to Feedback

Thanks for the PR.

The name is not acceptable, as the exponential of a matrix is something different (expm in Matlab): https://en.wikipedia.org/wiki/Matrix_exponential

I wish I was more familiar with machine learning to know how frequent calculating this is. If it is, there should be a name for this, no?

The fact that $\text{map}\{|e| \text{Math.exp}(e)\}$ is quite simple to do makes me even more hesitant to add that method too.

#4 - 11/20/2017 03:45 AM - MSP-Greg (Greg L)

marcandre (Marc-Andre Lafortune) wrote:

Thanks for the PR.

The name is not acceptable, as the exponential of a matrix is something different

I agree. Not quite a single line method. Maybe something like `entrywise_exp` or `entrywise_exponential` like in 60860. But as you mentioned, 'is quite simple'...

#5 - 11/20/2017 06:32 AM - shevegen (Robert A. Heiler)

Once again it is back to the oldest problem in computer technology - giving things a proper name. :-)

#6 - 11/20/2017 06:52 AM - greggzst (Grzegorz Jakubiak)

marcandre (Marc-Andre Lafortune) wrote:

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I changed the name to `entrywise_exp` as suggested. True about the simplicity but it would be a good shorthand taking into consideration fact that it is used in many cases e.g. multivariate normal distribution.