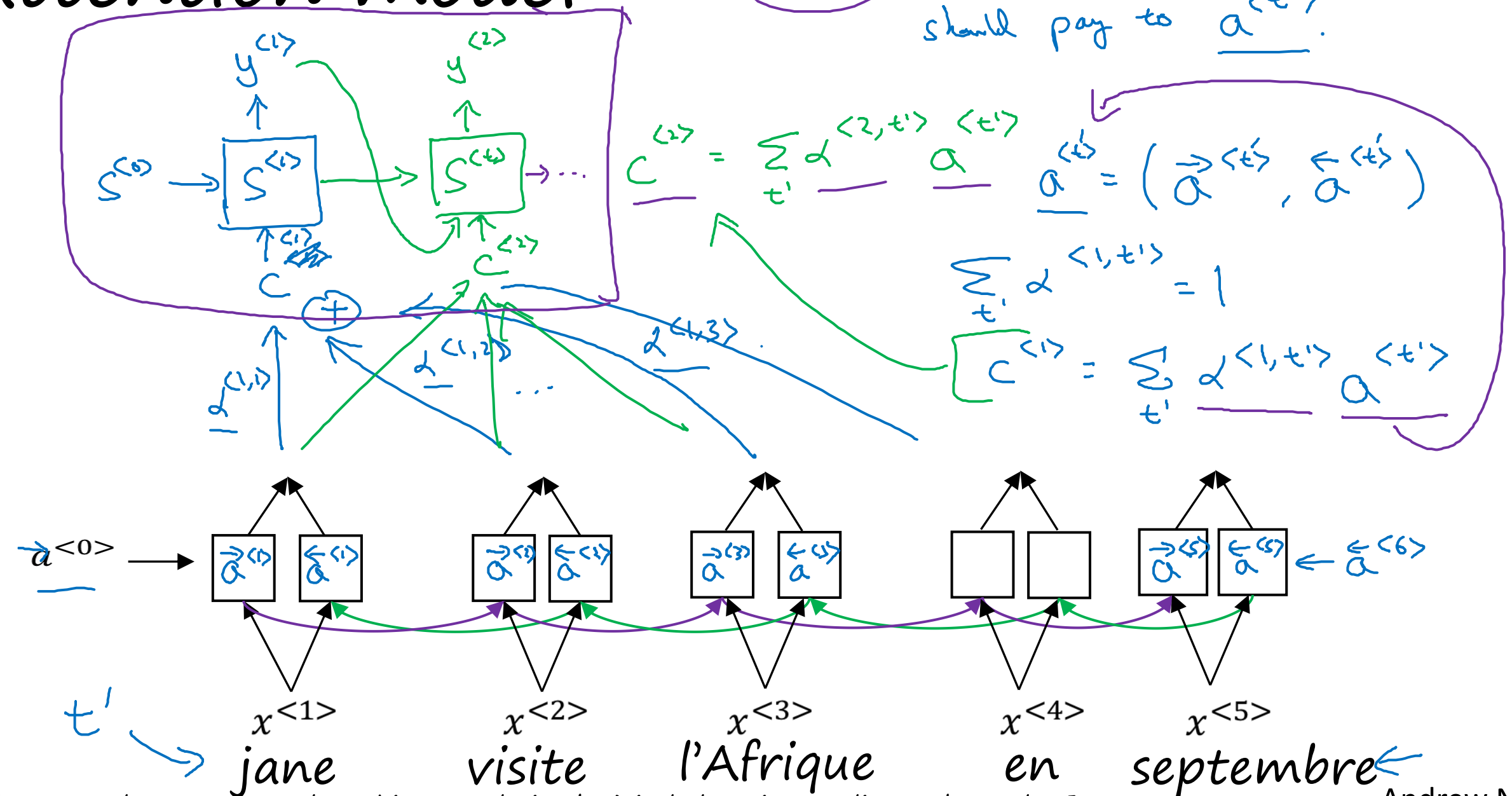
deeplearning.ai

Sequence to sequence models

Attention model

Attention model



[Bahdanau et. al., 2014. Neural machine translation by jointly learning to align and translate]

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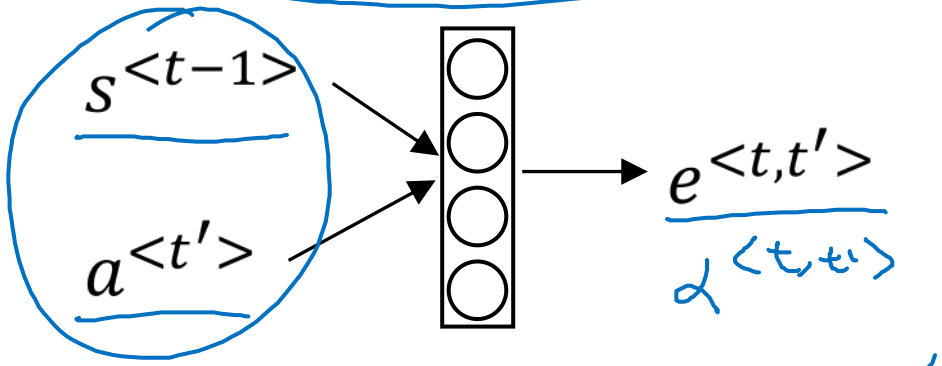
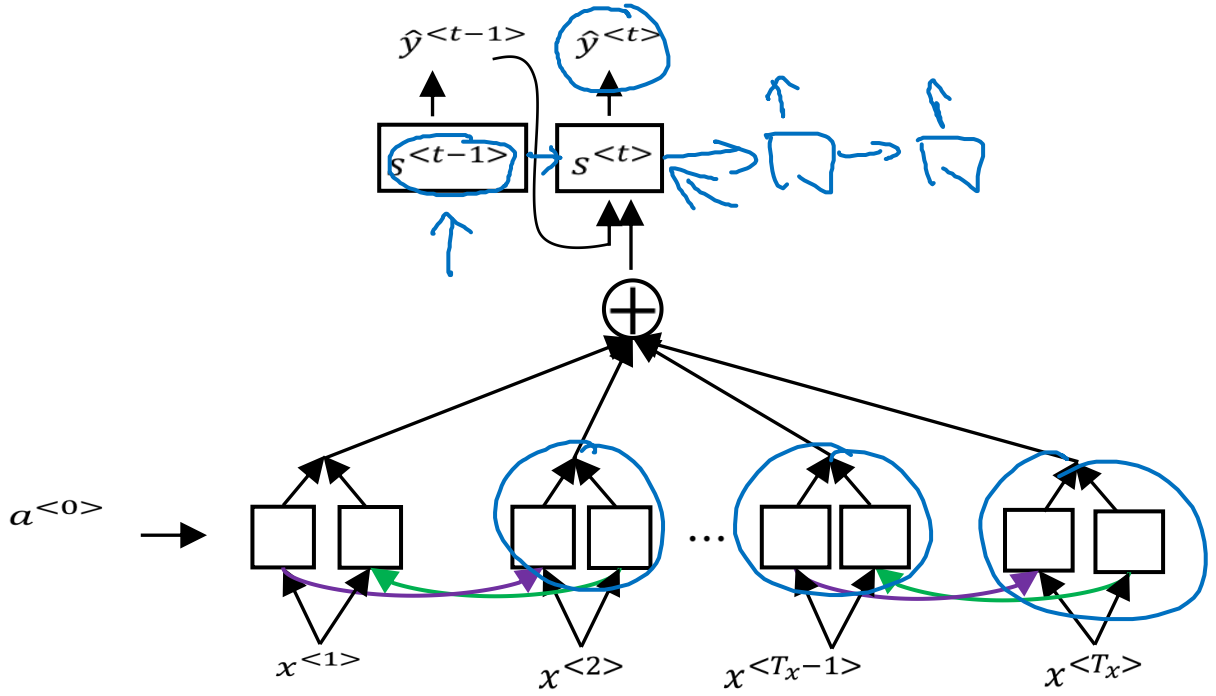
Computing attention $\alpha^{<t,t'>}$

$\alpha^{<t,t'>}$ = amount of attention $y^{<t>}$ should pay to $a^{<t'>}$

$$\alpha^{<t,t'>} = \frac{\exp(e^{<t,t'>})}{\sum_{t'=1}^{T_x} \exp(e^{<t,t'>})}$$





[Bahdanau et. al., 2014. Neural machine translation by jointly learning to align and translate]

[Xu et. al., 2015. Show, attend and tell: Neural image caption generation with visual attention]

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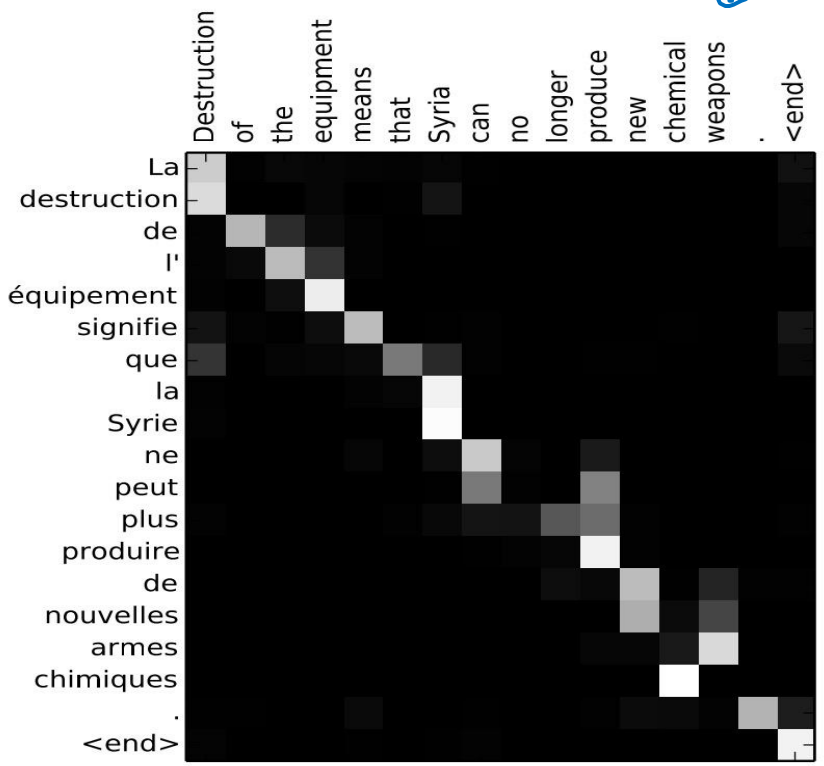
Attention examples

July 20th 1969 → $1969 - 07 - 20$

23 April, 1564 → $1564 - 04 - 23$

Visualization of $\alpha^{<t,t'>}$:



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