

Sequence to sequence models

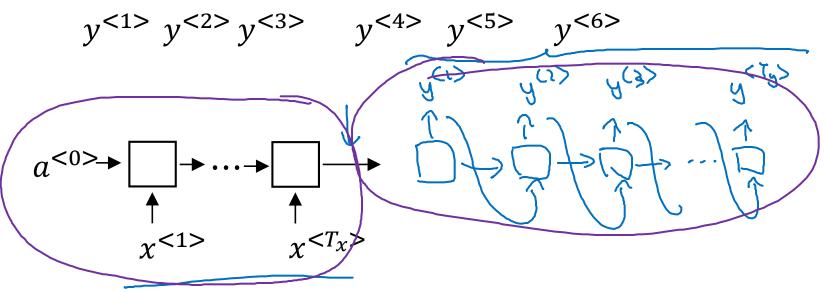
Basic models

Sequence to sequence model

$$\chi$$
<1> χ <2> χ <3> χ <4> χ <5>

Jane visite l'Afrique en septembre

→ Jane is visiting Africa in September.



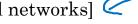
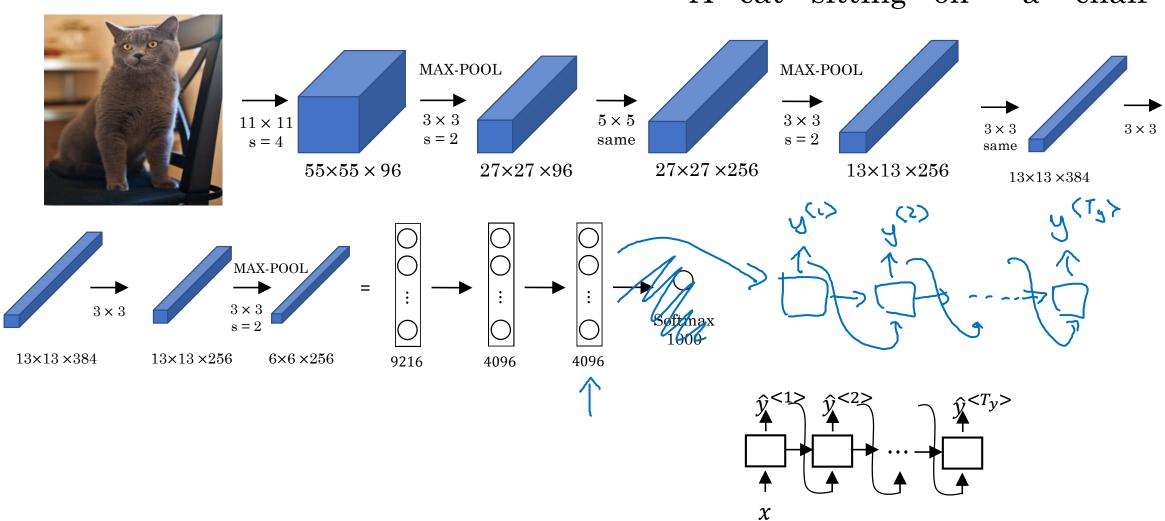


Image captioning

 $y^{<1>}y^{<2>}$ $y^{<3>}$ $y^{<4>}$ $y^{<5>}$ $y^{<6>}$ A cat sitting on a chair



[Mao et. al., 2014. Deep captioning with multimodal recurrent neural networks] [Vinyals et. al., 2014. Show and tell: Neural image caption generator] [Karpathy and Li, 2015. Deep visual-semantic alignments for generating image descriptions]