



deeplearning.ai

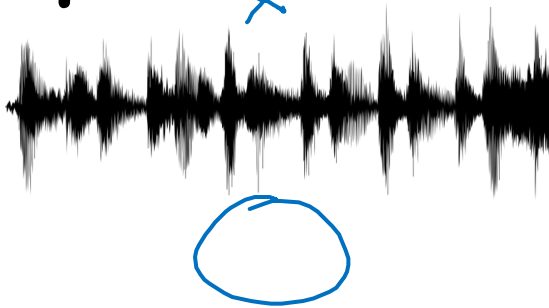
Recurrent Neural Networks

Different types of RNNs

Examples of sequence data T_x T_y

Speech
recognition

Music generation



"The quick brown fox jumps
over the lazy dog."



Sentiment classification

"There is nothing to
like in this movie."



DNA sequence analysis

AGCCCCTGTGAGGAACTAG

AGCCCCTGTGAGGAACTAG

Machine translation

Voulez-vous chanter avec
moi?

Do you want to sing with
me?

Video activity recognition



Running

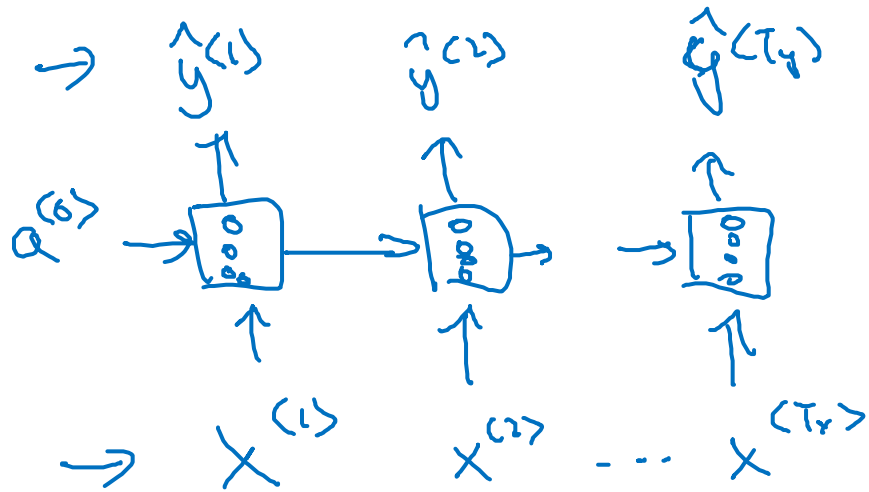
Name entity recognition

Yesterday, Harry Potter
met Hermione Granger.

Yesterday, Harry Potter
met Hermione Granger.

Examples of RNN architectures

$$T_x = T_y$$

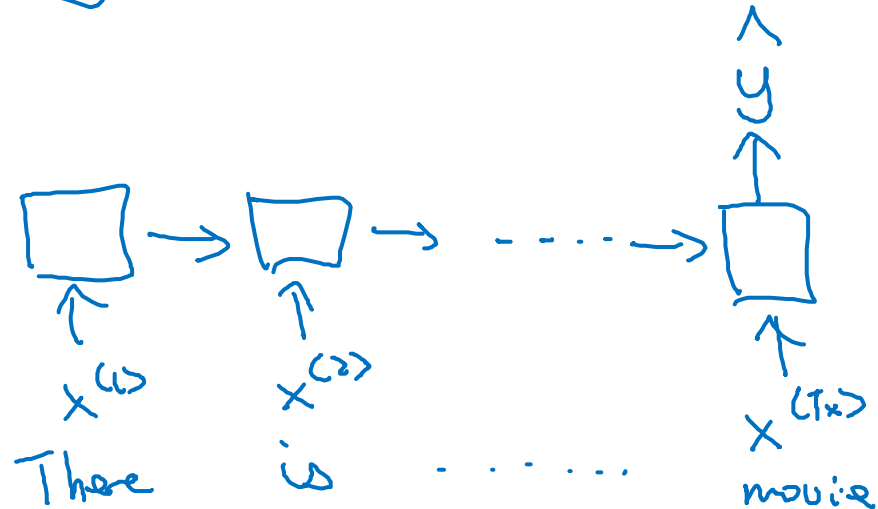


Many-to-many

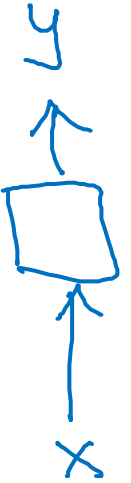
Sentiment classification-

$x = \text{text}$

$y = 0/1 \quad 1 \dots 5$



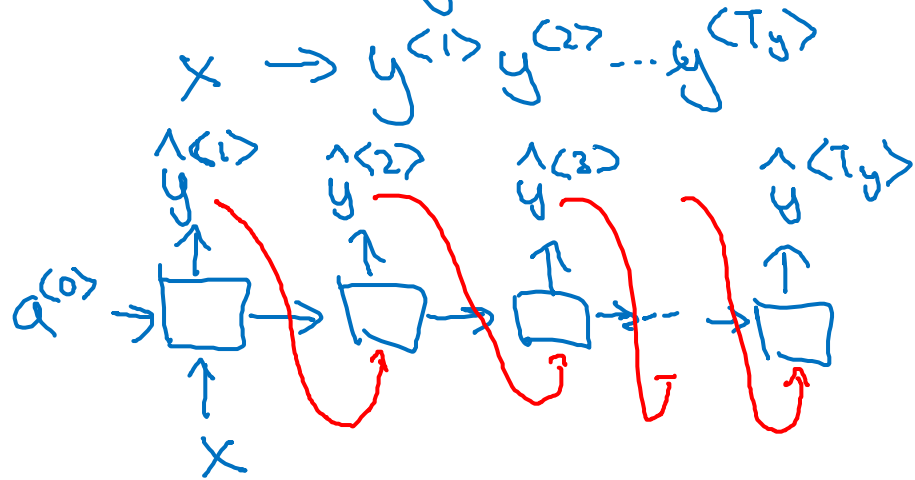
Many-to-one



One-to-one

Examples of RNN architectures

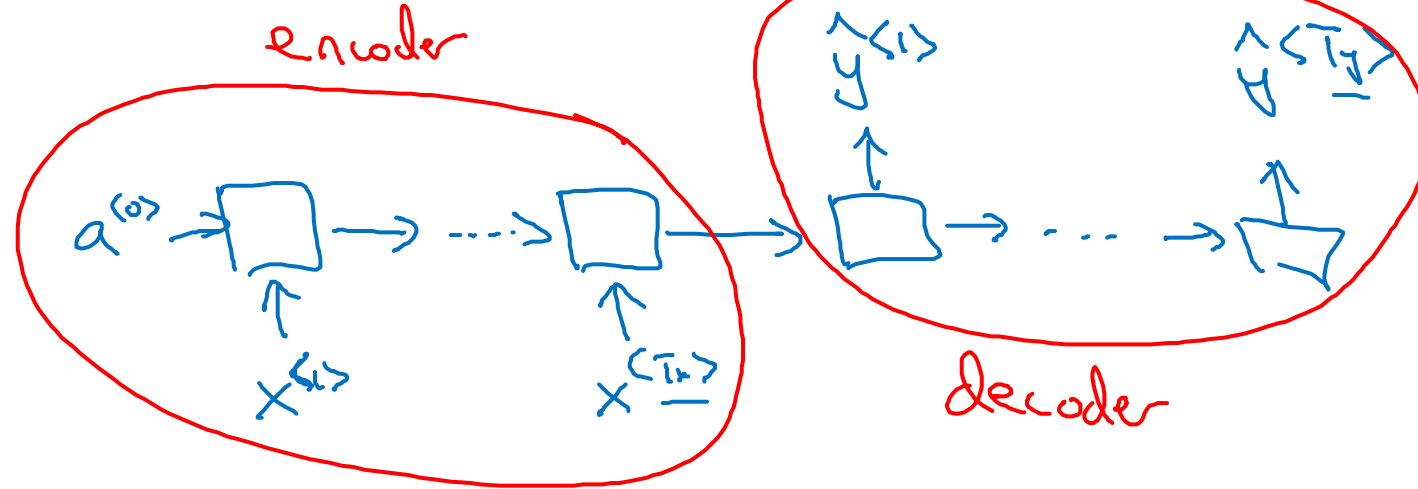
Music generation



One-to-many

$$x = \phi$$

Machine translation



Many-to-many

Summary of RNN types

