



deeplearning.ai

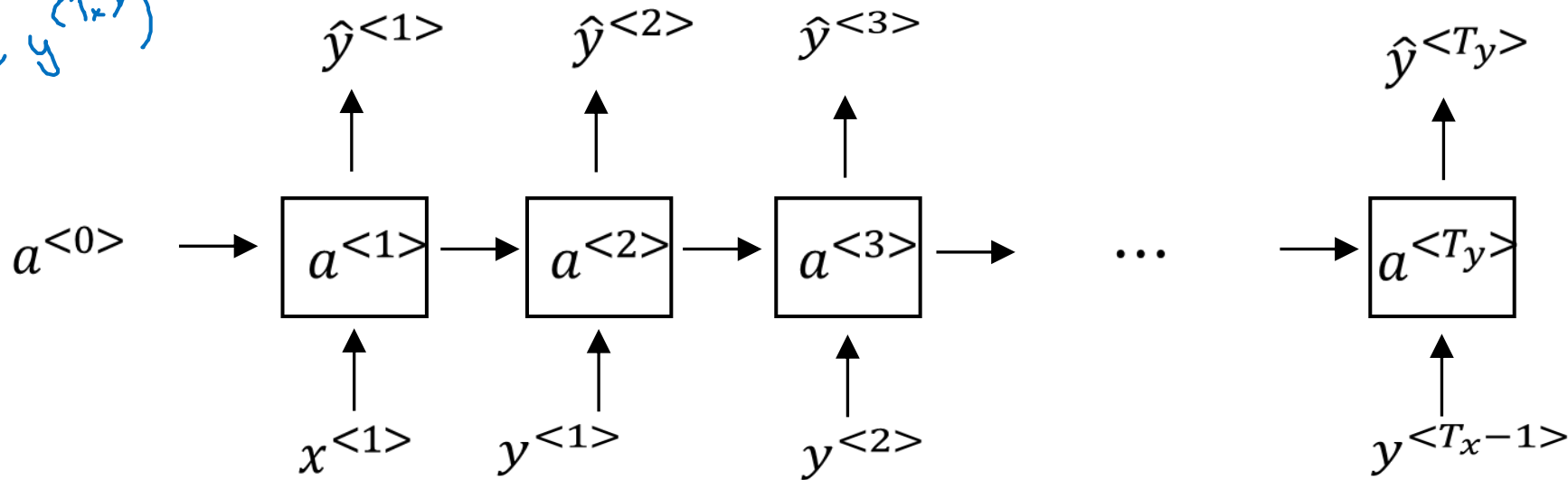
Recurrent Neural Networks

Sampling novel
sequences

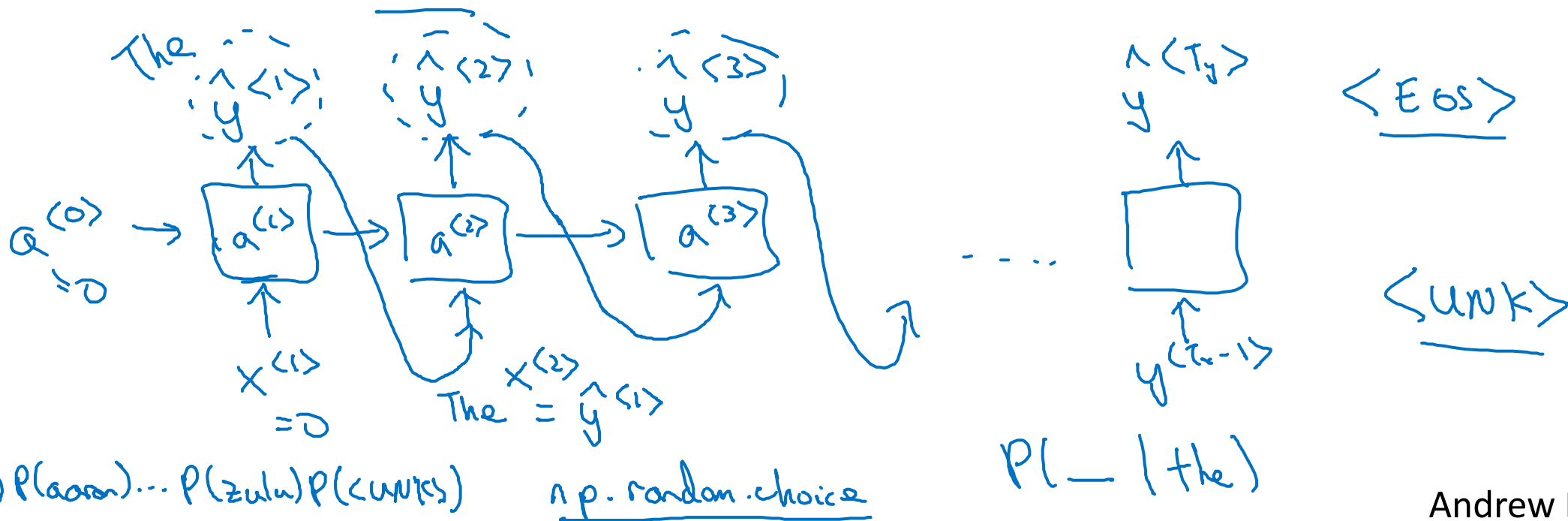
Sampling a sequence from a trained RNN

$P(y^{(1)}, \dots, y^{(T_y)})$

Training:



Sampling:



$\rightarrow P(a) P(a^{(1)} | a^{(0)}) \dots P(y^{(T_y)} | a^{(T_y-1)})$

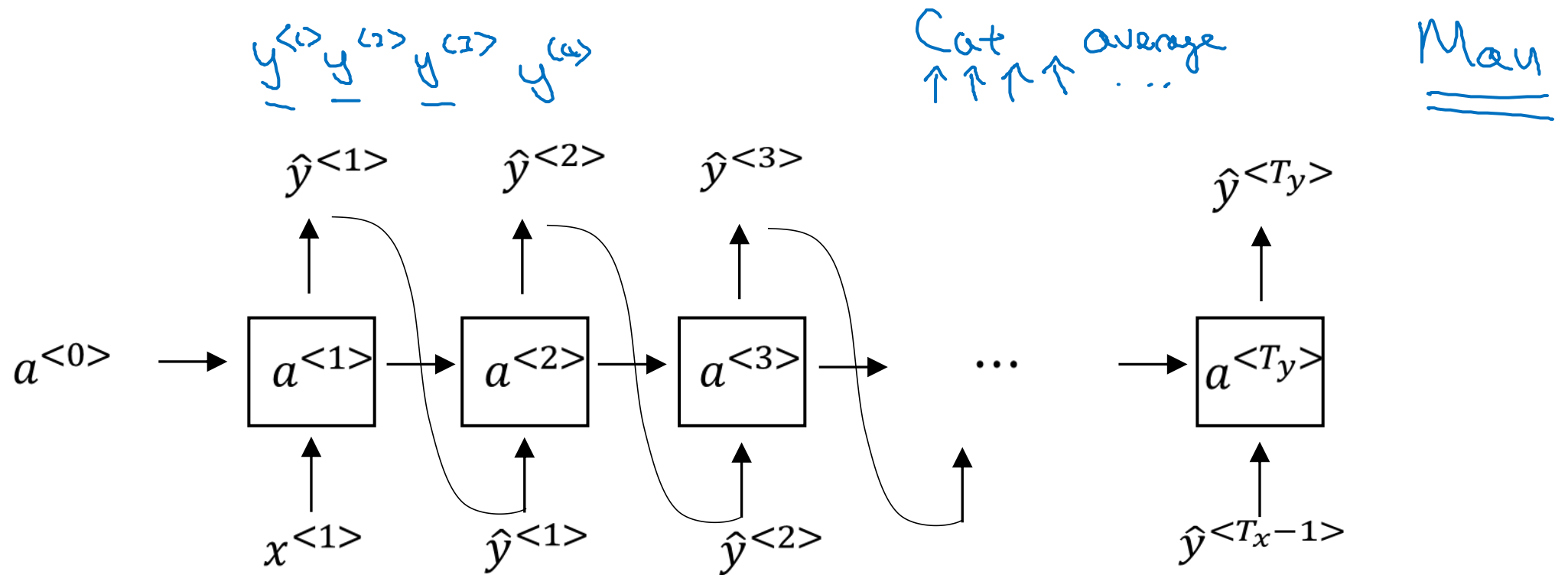
np.random.choice

$P(_ | \text{the})$

Character-level language model

→ Vocabulary = [a, aaron, ..., zulu, <UNK>]

→ Vocabulary = [a, b, c, ..., z, \backslash , ., , , ;, 0, ..., 9, A, ..., Z]



Sequence generation

News

President Enrique Peña Nieto, announced
senior's sulk former coming football
Langston paring.

"I was not at all surprised," said high
Langston.

"Concussion epidemic", to be examined. ←

The gray football the told some and this
has on the UEFA icon, should money as.

Shakespeare

The mortal moon hath her eclipse in love.

And subject of this thou art another this
fold.

When better be my love to me see shadows.

For whose are uses of mine eyes heaven.