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**Machine Learning with Python-From Linear Models to Deep Learning**[Course](#)[Progress](#)[Dates](#)[Discussion](#)[Resources](#)[Course](#) / [Unit 3. Neural networks \(2.5 wee...](#) / [Lecture 11. Recurrent Neural Ne](#)[< Previous](#)

## 2. Markov Models

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Exercises due Mar 29, 2023 08:59 -03 Past due


## Markov Models




### Video

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## Markov Symbols

1 point possible (graded)

To specify a Markov language model, what additional symbols do we need to add to our vocabulary symbols?

(Choose all that apply.)

☐ a start symbol

☐ an end symbol

☐ a symbol for unknown words

☐ a symbol for complicated words

UNK

0.1

0.2

0.2

0.3

0.2

Using a first order Markov model specified above, what is the probability of generating <beg> ML course UNK <end>?

☐ 0.007☐ 0.01☐ 0.003☐ 0.005

Which of the following sentences are probable to generate?  
(Choose all those apply.)

☐ <beg> course ML is UNK <end>☐ <beg> <end>☐ course is ML <end>☐ <beg> ML course <end>

You have used 0 of 2 attempts

## Maximum Likelihood

1 point possible (graded)

Suppose our training examples are the following three sentences.

ML courses are cool.

Humanities courses are cool.

But some courses are boring.

[Submit](#)


You have used 0 of 2 attempts

## Discussion


**Topic:** Unit 3. Neural networks (2.5 weeks):Lecture 11. Recurrent Neural Networks 2 /  
2. Markov Models

[Show all posts](#)  ["UNK" origin?](#)

[I couldn't help but be tickled by the term "UNK". I figured it had some type of logical backstory, but when I lo](#)

 [How to better understand the logic behind the probabilities in the Markov table's columns?](#)



[Taking the column "end" as example \(Transition Probabilities exercise\), I can understand that the probability](#)

 ["probable to generate"?](#)

[The phrase "probable to generate" should be changed to "possible to generate". The word "probable" means](#)

 [the probability table](#)

[I understand why the probabilities in each row should sum to 1.0, but I also think that each column should als](#)

 [Product of Probabilities](#) [Rolling a weighted dice.](#)

[The example of rolling the weighted dice is a perfect coincidence resulting a nice sentence. But, because w](#)

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