

ColumbiaX: CSMM.101x Artificial Intelligence (AI)

Help



 Artificial Intelligence Course: Getting Started

- Week 1: Introduction to Al
- Week 2: Intelligent Agents and Uninformed Search
- Week 3: Heuristic Search
- Week 4: Adversarial Search and Games
- Week 5: Machine Learning 1
- Week 6: Machine Learning 2
- Week 7: Machine Learning 3
- ▶ Week 8: CSP
- Week 9: Reinforcement

Week 11: Al Applications: NLP > Week 11 Quiz: NLP > Week 11 Quiz

Week 11 Quiz

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Q1

10.0/10.0 points (graded)

The higher the probability of the test corpus the more perplex is the language model.

True

False

Submit Y

You have used 1 of 1 attempt

1 Answers are displayed within the problem

Q2

10.0/10.0 points (graded)

In calculating the probability of a word, a trigram model looks at the three previous words.

True

False

Submit

You have used 1 of 1 attempt

• Answers are displayed within the problem

Q3

10/10 points (graded)

Check all that apply:

Learning

- Week 10: **Logical Agents**
- ▼ Week 11: AI **Applications: NLP**

Week 11: Suggested Readings

11.1 AI Applications: NLP

11.2 Text Classification

11.3 Text Classification Example

11.4 Language Models

11.5 Example of **Bigrams**

11.6 Progress in NLP

Week 11 Quiz: NLP

Quiz due Apr 11, 2017 05:00 IST

Week 11 Project: NLP

Project due Apr 11, Ø 2017 05:00 IST

Week 11 Discussion Questions

- There is high interest in natural language processing nowadays 🗸
- There are vast amounts of text around on the web
- With tools like Siri and Alexa Echo, using natural language is becoming increasingly common <
- Learning from text is a low hanging fruit because human language is so simple
- Language is difficult to model in Al 🗸

Submit

You have used 1 of 1 attempt

Answers are displayed within the problem

Q4

10.0/10.0 points (graded)

There has been significant progress in machine translation over the last decade, because statistical models were trained to learn how to translate from a very large dataset of good quality translations.

- Yes
- No

Submit

You have used 1 of 1 attempt

Answers are displayed within the problem

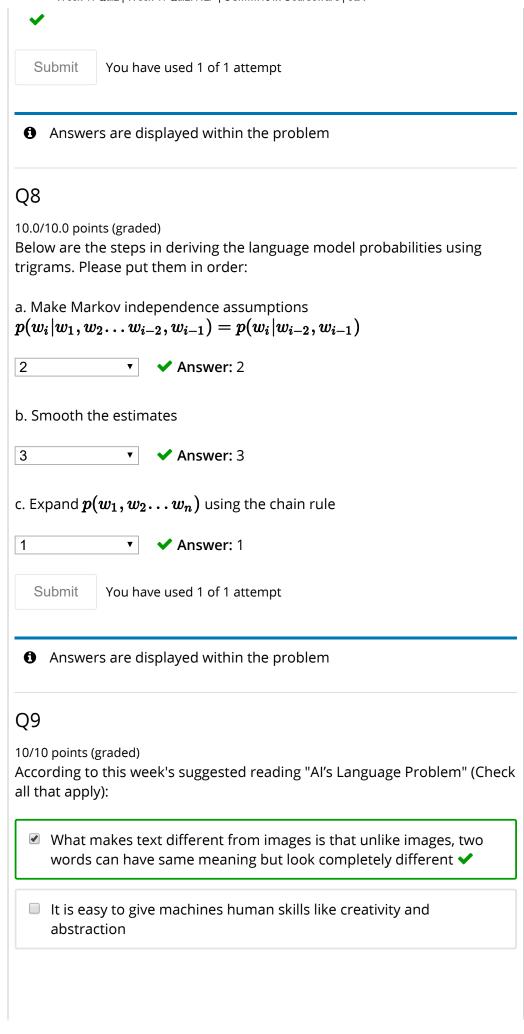
Q5

10.0/10.0 points (graded)

Text classification uses m-estimate of the probabilities:

-. The use of m-estimate is a smoothing technique.

•	Yes ✓
0	No
Sı	ubmit You have used 1 of 1 attempt
0	Answers are displayed within the problem
Q6	
10.0/10.0 points (graded) The idea behind bigram models is to look only one word in the past. That is, approximate the probability $P(w_k w_1\cdots w_{k-1})$ with $P(w_k w_{k-1})$	
•	True ✓
0	False
Sı	ubmit You have used 1 of 1 attempt
ð	Answers are displayed within the problem
Q7	
10.0/10.0 points (graded) Check all that apply:	
•	A language model is a probability distribution over sequences of words 🗸
•	Smoothing is a modification of the probability of words to avoid probabilities of zero ✓
•	Perplexity asseses how confused is the language model when applied on a new corpus. If the model is confused, the perplexity will be high. ✓
	Perplexity asseses how confused is the language model when applied on a new corpus. If the model is confused, the perplexity will



- A problem with applying advanced machine learning methods to text is that a same word can have different meanings in different contexts 🗸
- Deep learning shows great promise to generalize from vision and games to understanding text 🗸



Submit

You have used 1 of 1 attempt

1 Answers are displayed within the problem

Q10

10/10 points (graded)

According to this week's suggested reading "Al's Language Problem" (Check all that apply):

- Advanced deep learning systems not only excel in recognizing images and playing games, they are intelligible, that is we understand well how they come up with their answers
- The ultimate Al system would not only be able to provide answers, it would also be able to communicate with human language 🗸
- The ultimate Al system would not only be able to provide an answers, it would also be able to provide explanations 🗸
- Today, Google search algorithms embed a functionality to get the meaning of text rather than just leveraging keywords and links between webpages



Submit

You have used 1 of 1 attempt

Answers are displayed within the problem

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