

Unit 11 - Week 10

Course outline

How to access the portal?

Week 1

Week 2

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Week 10

Encoder-Decoder model for Neural Machine Translation

RNN Based Machine Translation

Recap and Connecting Bloom Taxonomy with Machine Learning

Introduction to Attention based Translation

Research Paper discussion on "Neural machine translation by jointly learning to align and translate"

Typical NMT architecture architecture and models for multi-language translation

Beam Search

Variants of Gradient Descent

Week 10 Lecture materials

Quiz : Assignment 10

Applied Natural Language Processing : Week 10 Feedback

Week 11

Week 12

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Assignment 10

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-10-09, 23:59 IST.

1) In the encoder, the fixed length vector at the output represents _____

1 point

- Word vector
 Encoding of the input sentence
 Translation of the sentence
 Softmax containing the probability score of all words in the vocabulary

No, the answer is incorrect.

Score: 0

Accepted Answers:
Encoding of the input sentence

2) The encoder and decoder are trained independently

1 point

- True
 False

No, the answer is incorrect.

Score: 0

Accepted Answers:
False

3) In the global attention model, the decoder selectively learns to align words

1 point

- True
 False

No, the answer is incorrect.

Score: 0

Accepted Answers:
False

4) In the attention model (global and local), the attention

0 points

- True
 False

No, the answer is incorrect.

Score: 0

Accepted Answers:
False

5) Sequence-to-sequence translation represents a conditional language model

1 point

- True
 False

No, the answer is incorrect.

Score: 0

Accepted Answers:
True

6) What is true about the attention based NMT?

1 point

- Alignments are not trained as part of the training
 Allows the decoder to peek into specific parts of the input sentence
 BLEU scores could be higher (in terms of %) when compared to non-attention based NMT models
 It is a deep learning technique

No, the answer is incorrect.

Score: 0

Accepted Answers:
Allows the decoder to peek into specific parts of the input sentence
BLEU scores could be higher (in terms of %) when compared to non-attention based NMT models
It is a deep learning technique

7) Beam search is a greedy search algorithm

1 point

- True
 False

No, the answer is incorrect.

Score: 0

Accepted Answers:
False

8) Beam search guarantees the best translation for SMT and NMT

1 point

- True
 False

No, the answer is incorrect.

Score: 0

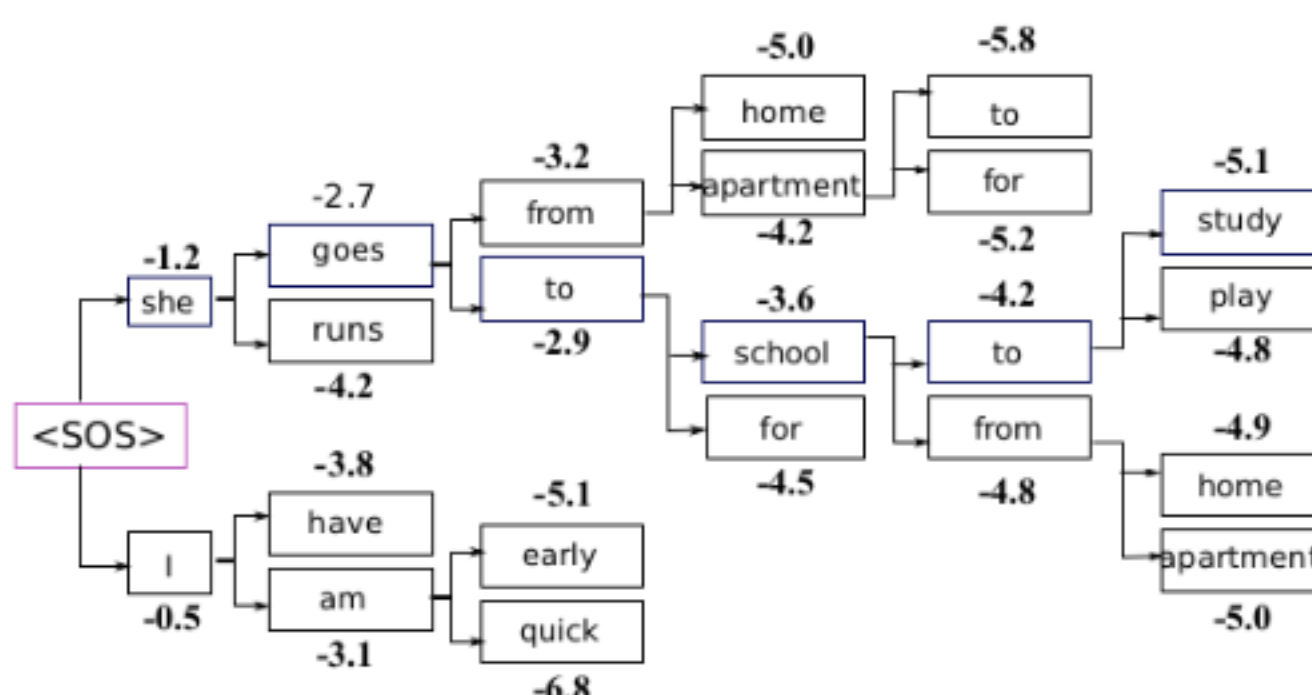
Accepted Answers:
False

9) The beam search (see diagram) was terminated after at a specified step and score for each partial translation is given. What is the top scoring hypothesis?

1 point

Beam Size = 2

$$\text{Score} = P(y_1, y_2, \dots, y_m | \mathbf{X}) = \sum_{t=1}^T \log P(y_t | \langle \text{SOS} \rangle, \dots, y_{t-1}, \mathbf{X})$$



- she goes to school from home
 she goes to school from apartment
 she goes to school to play
 she goes to school to study

No, the answer is incorrect.

Score: 0

Accepted Answers:
she goes to school to play

Tutorial - Translation With a Sequence to Sequence Network and Attention by Sean Robertson : [Link](#)