How to use RNNs

Quiz, 5 questions

5/5 points (100%)

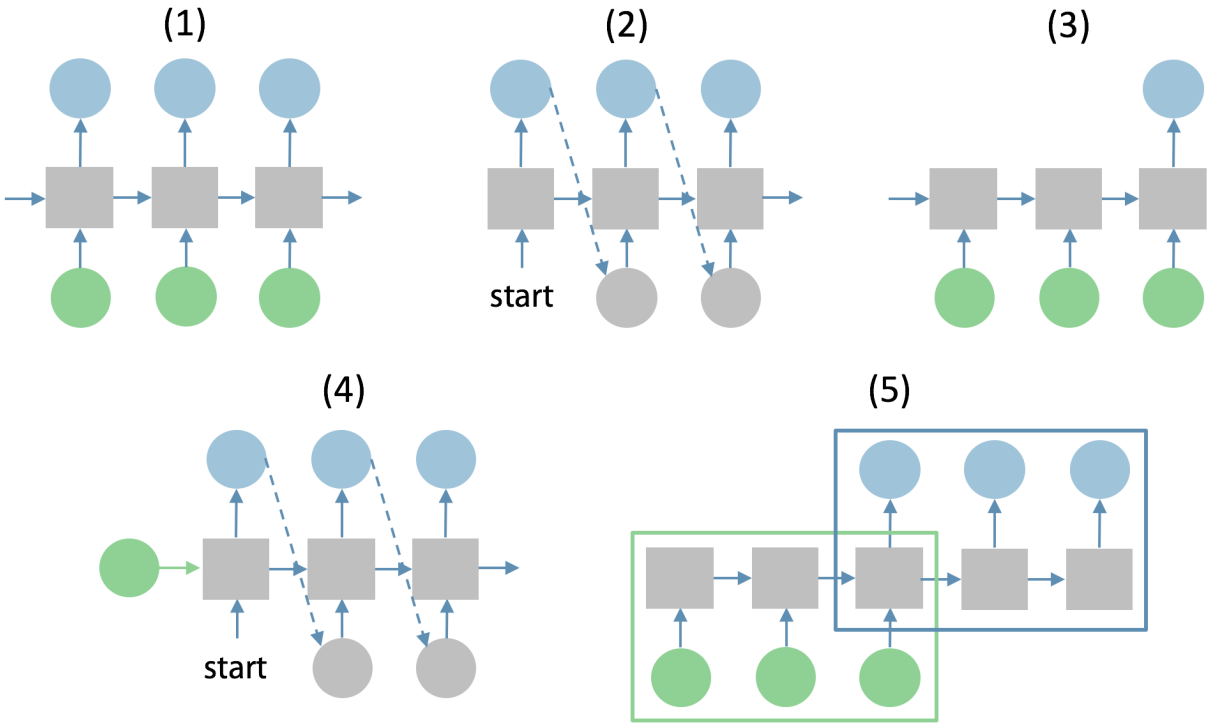
Congratulations! You passed!

Next Item

1 / 1 point

1.
Consider RNNs for five different types of tasks:

1. Element-wise sequence classification
2. Unconditional sequence generation
3. Sequence classification
4. Conditional sequence generation
5. Sequence translation



Which of these RNNs is the most suitable one to solve the task of music generation from scratch?

- 1. Element-wise sequence classification

2. Unconditional sequence generation

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5/5 points (100%)

Correct

That is it!

3. Sequence classification

4. Conditional sequence generation

5. Sequence translation

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1 / 1 point

2.

Consider 5 different RNNs from the previous question. Which of these RNNs is the most suitable one to solve the task of music generation from notes?

1. Element-wise sequence classification

2. Unconditional sequence generation

3. Sequence classification

4. Conditional sequence generation

5. Sequence translation

Correct

Yes, this is a translation from notes to audio.

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1 / 1 point

3.

Consider 5 different RNNs from the first question. We want to generate music from scratch and additionally, each generated sample should be from a specific instrument. Which of these RNNs is the most suitable one to solve this task?

1. Element-wise sequence classification

2. Unconditional sequence generation

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5/5 points (100%)

3. Sequence classification

4. Conditional sequence generation

Correct
That is it!

5. Sequence translation

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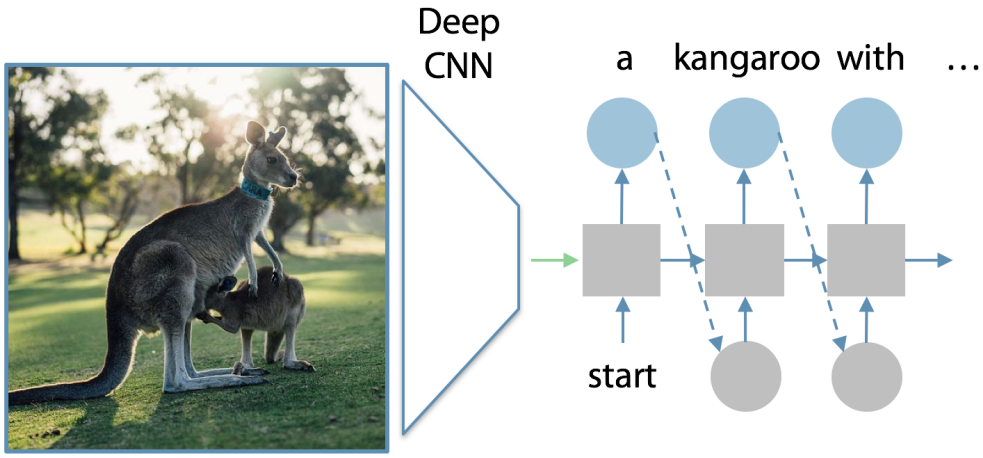
1 / 1 point

4.
Choose correct statements about image captioning architecture from the lecture:



This is a sequence-to-sequence architecture (sequence translation (5) from the first question).

Un-selected is correct

Any CNN may be used to represent an image with a feature vector.

Correct
We can use any CNN but the stronger, the better!

It is possible to train this model end-to-end without pretraining.

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Correct
It is possible if we have a big enough dataset of images with captions. But in practice, the CNN part is usually pretrained on a big dataset of images without captions. The reasons are:

1. Datasets of images without captions are much bigger and we need a lot of images to train a sophisticated CNN.
2. Separate training of the CNN is much faster.

5/5 points (100%)

- [x] There is no benefit in pre-training of any part of this model.

Un-selected is correct

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1 / 1 point

5.
Suppose Nick has a trained sequence-to-sequence machine translation model. He wants to generate the translation for a new sentence in the way that this translation has the highest probability in the model. To do this at each time step of the decoder he chooses the most probable next word instead of the generating from the distribution. Does this scheme guaranty that the resulting output sentence is the most probable one?

- [ ] Yes
- [x] No

Correct
Unfortunately, it is true. That is why beam search is usually used to generate more probable sequences.
