

Hide menu

Siamese Networks

- ✓

Video:

Week Introduction

46 sec
- ✓

Video:

Siamese Networks

2 min
- ✓

Reading:

Siamese Network

5 min
- ✓

Video:

Architecture

3 min
- ✓

Reading:

Architecture

3 min
- ✓

Lab:

Creating a Siamese Model

20 min
- ✓

Video:

Cost Function

3 min
- ✓

Reading:

Cost Function

6 min
- ✓

Video:

Triplets

5 min
- ✓

Reading:

Triplets

6 min
- ✓

Video:

Computing The Cost I

5 min
- ✓

Reading:

Computing the Cost I

6 min
- ✓

Video:

Computing The Cost II

6 min
- ✓

Reading:

Computing the Cost II

5 min
- ✓

Lab:

Implementing the Modified Triplet Loss in TensorFlow

30 min
- ✓

Video:

One Shot Learning

2 min
- ✓

Reading:

One Shot Learning

4 min
- ▶

Video:

Training / Testing

3 min
- ⊕

Reading:

Training / Testing

4 min
- 📅

Lab:

Evaluate a Siamese Model

20 min
- ▶

Video:

Week Conclusion

37 sec

Lecture Notes (Optional)

Practice Quiz

Assignment: Question Duplicates

Acknowledgments

Week 3 > Training / Testing

< PreviousNext >

Training / Testing

After preparing the batches of vectors, you can proceed to multiplying the two matrices. Here is a quick recap of the first step:

Prepare Batches

Question 1:
batch size b

What is your age?

Can you see me?

Where are thou?

When is the game?

Question 2:
batch size b

How old are you?

Are you seeing me?

Where are you?

What time is the game?

$v_1 = (1, d_model)$

v1_1

v1_2

v1_3

v1_4

v_2

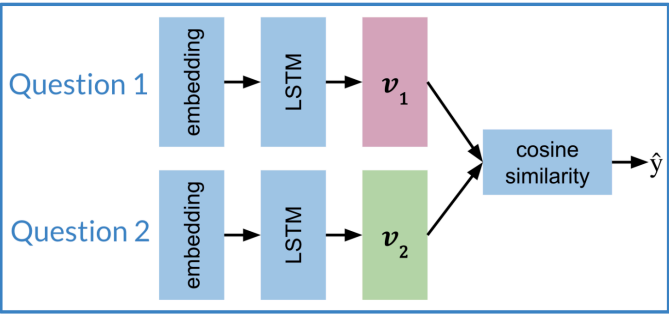
v2_1

v2_2

v2_3

v2_4

The next step is to implement the siamese model as follows:



Create a subnetwork:

- 1) Embedding
- 2) LSTM
- 3) Vectors
- 4) Cosine Similarity

Finally when **testing**:

1. Convert two inputs into an array of numbers
2. Feed it into your model
3. Compare v_1, v_2 using cosine similarity
4. Test against a threshold τ

Mark as completed