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Introduction to Neural Networks and TensorFlow

- ✓

Video:

Course 3 Introduction

3 min
- ✓

Video:

Lesson Introduction

44 sec
- ✓

Reading:

Lesson Introduction Clarification

10 min
- ▶

Video:

Neural Networks for Sentiment Analysis

3 min
- ✓

Reading:

Neural Networks for Sentiment Analysis

7 min
- ▶

Video:

Dense Layers and ReLU

2 min
- ✓

Reading:

Dense Layers and ReLU

5 min
- ▶

Video:

Embedding and Mean Layers

3 min
- ✓

Reading:

Embedding and Mean Layers

3 min
- 📅

Lab:

Introduction to TensorFlow

30 min
- 🔗

Ungraded App Item:

[IMPORTANT] Have questions, issues or ideas? Join our community on Discourse!

10 min

Practice Assignment: Classification Using Deep Neural Networks

Week 1 Embedding and Mean Layers

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Embedding and Mean Layers

Using an embedding layer you can learn word embeddings for each word in your vocabulary as follows:

Vocabulary	Index		
I	1	0.020	0.006
am	2	-0.003	0.010
happy	3	0.009	0.010
because	4	-0.011	-0.018
learning	5	-0.040	-0.047
NLP	6	-0.009	0.050
sad	7	-0.044	0.001
not	8	0.011	-0.022

Trainable weights

Vocabulary x Embedding

The mean layer allows you to take the average of the embeddings. You can visualize it as follows:

Tweet: I am happy

Vocabulary	Index		
I	1	0.020	0.006
am	2	-0.003	0.010
happy	3	0.009	0.010

Mean of the word embeddings

0.009
0.009

No trainable parameters

This layer does not have any trainable parameters.

