

深度学习基础课程

Deep Learning Foundation Course



[https://www.streamingnology.com](http://www.streamingnology.com)



<https://github.com/streamingnology>



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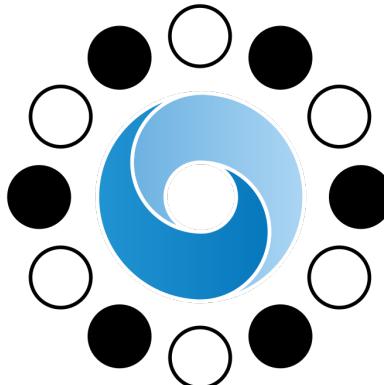


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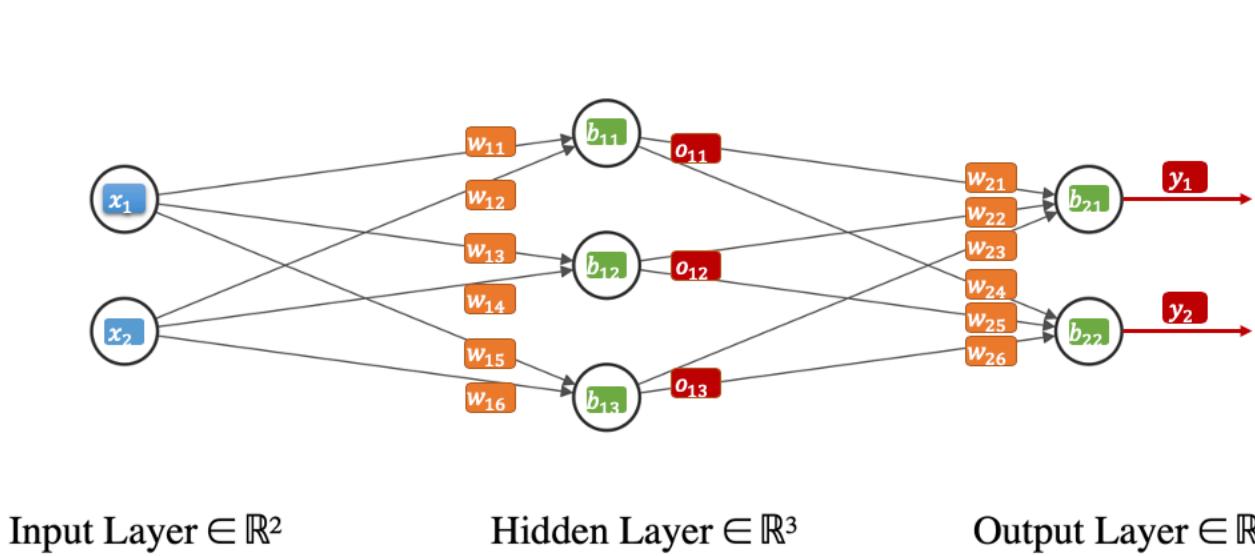


AlphaGo



Talk is cheap. Show me the code.

Linus Torvalds

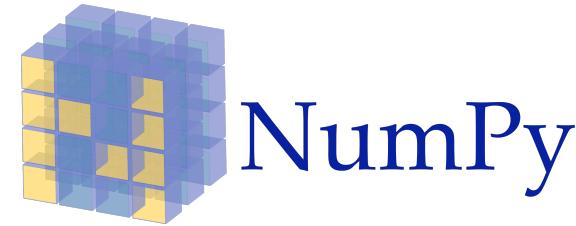


```
import tensorflow as tf

l1 = tf.keras.layers.Dense(units=3, input_shape=[2])
l2 = tf.keras.layers.Dense(units=2)

model = tf.keras.Sequential([l1,l2])

model.compile(loss='mean_squared_error',optimizer=tf.keras.optimizers.Adam(0.1))
```



- Python学习 <https://www.runoob.com/python3/python3-tutorial.html>
- Numpy学习 <https://www.runoob.com/numpy/numpy-tutorial.html>



Simple. Flexible. Powerful.

```
from tensorflow import keras
from tensorflow.keras import layers

# Instantiate a trained vision model
vision_model = keras.applications.ResNet50()

# This is our video.encoding branch using the trained vision_model
video_input = keras.Input(shape=(100, None, None, 3))
encoded_frame_sequence = layers.TimeDistributed(vision_model)(video_input)
encoded_video = layers.LSTM(256)(encoded_frame_sequence)

# This is our text-processing branch for the question input
question_input = keras.Input(shape=(100,), dtype='int32')
embedded_question = layers.Embedding(10000, 256)(question_input)
encoded_question = layers.LSTM(256)(embedded_question)

# And this is our video question answering model:
merged = keras.layers.concatenate([encoded_video, encoded_question])
output = keras.layers.Dense(1000, activation='softmax')(merged)
video_qa_model = keras.Model(inputs=[video_input, question_input],
                             outputs=output)
```

Deep learning for humans.

Keras is an API designed for human beings, not machines. Keras follows best practices for reducing cognitive load: it offers consistent & simple APIs, it minimizes the number of user actions required for common use cases, and it provides clear & actionable error messages. It also has extensive documentation and developer guides.