1. ConX Neural Networks

1.1. The On-Ramp to Deep Learning

Built in Python 3 on Keras 2.

launch binder Binder https://circleci.com/gh/Calysto/conx/tree/master.svg?style=svgCircleCI codecov 59% codecov docs passing Documentation Status pypi package 3.7.10 PyPI version downloads 238/month PyPI downloads

Read the documentation at conx.readthedocs.io

Ask questions on the mailing list: conx-users

Implements Deep Learning neural network algorithms using a simple interface with easy visualizations and useful analytics. Built on top of Keras, which can use either TensorFlow, Theano, or CNTK.

A network can be specified to the constructor by providing sizes. For example, Network("XOR", 2, 5, 1) specifies a network named "XOR" with a 2-node input layer, 5-unit hidden layer, and a 1-unit output layer. However, any complex network can be constructed using the `net.connect()` method.

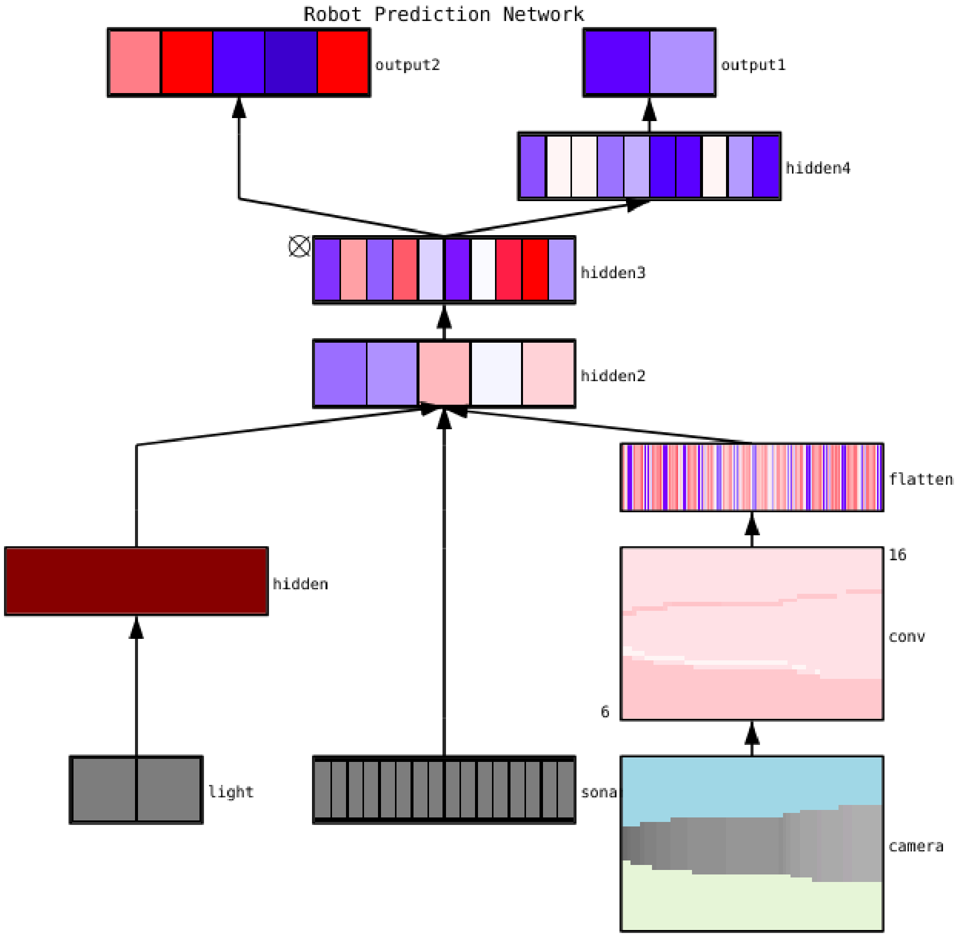
Computing XOR via a target function:

```
import conx as cx

dataset = [[[0, 0], [0]],
           [[0, 1], [1]],
           [[1, 0], [1]],
           [[1, 1], [0]]]

net = cx.Network("XOR", 2, 5, 1, activation="sigmoid")
net.dataset.load(dataset)
net.compile(error='mean_squared_error',
            optimizer="sgd", lr=0.3, momentum=0.9)
net.train(2000, report_rate=10, accuracy=1.0)
net.test(show=True)
```

Creates dynamic, rendered visualizations like this:



1.2. Examples

See conx-notebooks and the documentation for additional examples.

1.3. Installation

See How To Run Conx to see options on running virtual machines, in the cloud, and personal installation.