Taking Flux to the Web

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Abstract

Flux is an elegant machine learning library written in julia. Models made in flux can be loaded on a webpage by converting Flux.jl code into tensorflow.js code. This is done using FluxJS.jl. Flux demos made using FluxJS are put up at fluxml.ai

Motivation

Flux is a new machine learning library. Having demonstrations of models with Flux makes it easy for new users to learn. One of the best ways to demonstrate this is to put up interactive models on a website.

In a nutshell…

Create a model using Flux.jl

m = Chain(layers …)

Convert into javascript using FluxJS.jl

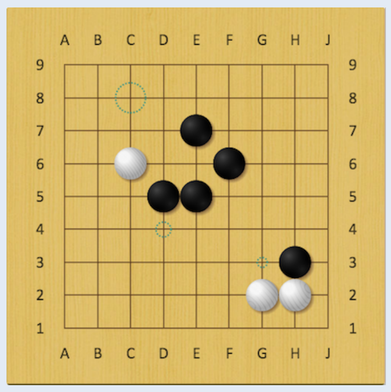
FluxJS.compile("m", m, input)

Load it on a webpage

flux.loadWeights(url…)

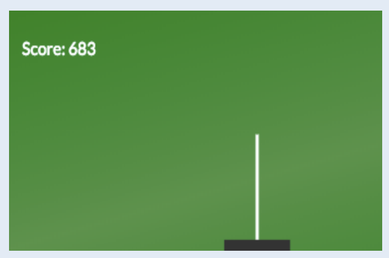
Models Created

The header of the Flux website is an animation made with a compositional pattern producing network (CPPN)



A demo showcasing the game of Go which uses Monte Carlo Tree Search (MCTS) guided by a neural net [1] (AlphaGo)

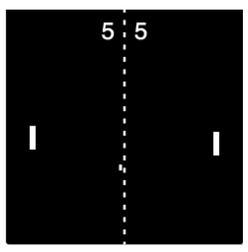
A demo of a model balancing a pole on a cart by applying forces from the left and right [2]

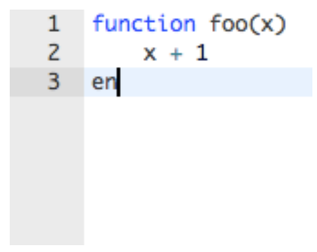


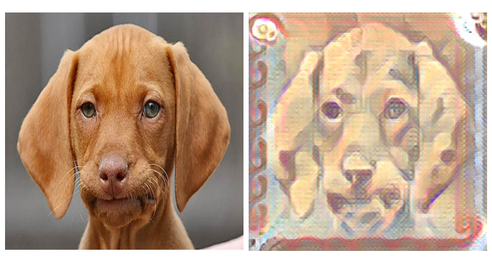
A demo that recognizes handwritten digits trained on MNIST data

Future Work

More models are coming up including pong, julia code generation and a style transfer demo.







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