



Florida International University

Summer 2023 Senior Design Project

Hyper Parameter Tuning For Deep Learning Neural Networks

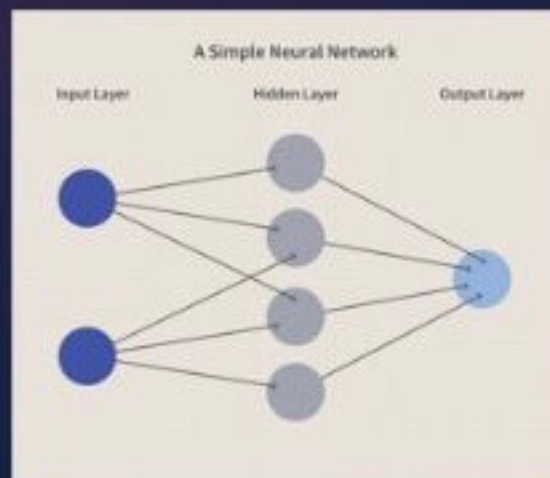
Students: Jacob Roman, Martin Macho, Jose Lopez

Mentor: Yanzhao Wu, Ph.D.

Instructor/Faculty: Professor Masoud Sadjadi, Florida International University



PROBLEM



RUN PYTHON
CONVOLUTIONAL
NEURAL NETWORK
USING C SHARP
INPUTS ON A
MODERN USER
INTERFACE

OBJECT DESIGN

Hyperparameter Tuning With Deep Learning Neural Networks

Input Parameters

Xavier Initialization: ☐ True

Weighted Distribution Size:

Epochs:

Hidden Layer Size:

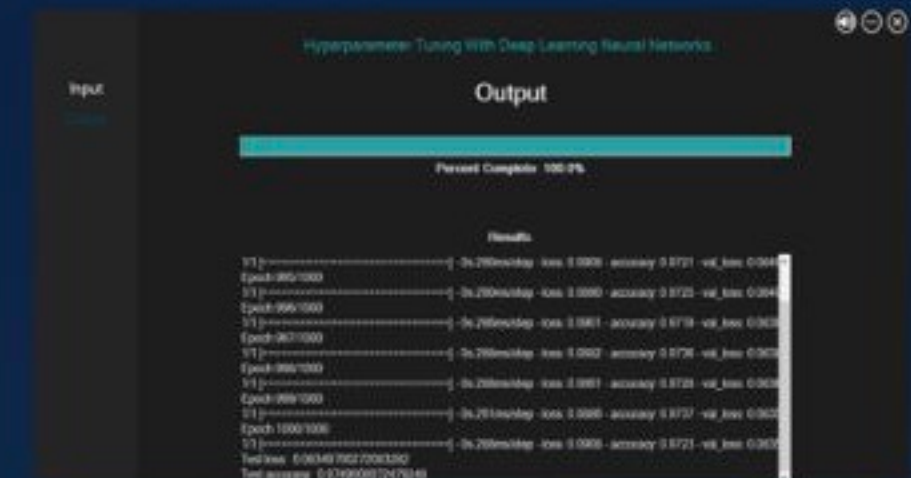
Priority:

Activation Function:

Xavier initialization, also known as Glorot initialization, is a technique used to initialize the weights of neural networks. It aims to set the initial weights in such a way that the activations and gradients during training are neither too large nor too small. By initializing the weights properly, Xavier initialization helps in preventing the problem of vanishing or exploding gradients, which can hinder the convergence of the neural network during training. It achieves this by scaling the initial weights based on the number of input and output neurons of a layer.

INPUTS FOR THE
DEEP LEARNING
NEURAL NETWORK

IMPLEMENTATION



OUTPUTS FROM
THE DEEP
LEARNING NEURAL
NETWORK FROM
PYTHON TO C
SHARP

ACKNOWLEDGEMENT

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