

Deep Learning Challenge analysis

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Overview

This challenge is based on the idea Alphabet Soup wants a tool that can help it select applicants and choose where funds go. With machine learning and deep neural networks, we can decide what binary classifier can predict whether applicants will be successful for Alphabet Soup. The program receives a csv in which it reads and utilizes to help with this decision.

Results

Data preparation

We bring in the CSV to make it legible and focus on the IS_SUCCESSFUL column for our program to learn from. We dropped the variables that should not influence the machine learning IE the name and EIN. Then we prepare for the data to be used.

What variable(s) are the target(s) for your model? The IS_SUCCESSFUL column for our program to learn from.

What variable(s) are the features for your model? The rest of the columns.

What variable(s) should be removed from the input data because they are neither targets nor features? We drop the name and the EIN columns.

How many neurons, layers, and activation functions did you select for your neural network model, and why? 3 and 1, because I couldn't choose more than that otherwise I would end up with 50% accuracy.

Were you able to achieve the target model's performance? I was not. I could only ever reach 73%.

What steps did you take in your attempts to increase model performance? I ran more epochs, less epochs, increased all variables, decreased all variables. I spent most of my time doing all of this and It only ever got worse until I hit 73% which I believe to be a fluke.