Matt Siriani

July 23, 2023

Rutgers Data Analytics Bootcamp

Deep Learning Challenge Analysis

This week, the assignment focused in on the concept of deep learning through coding. We learned about the regression model as well as how to train a model and figure out accuracy scores for a model. The purpose of this assignment was to evaluate the model based on the data that I was given and see if I could reach a certain percentile range with the accuracy score.

The variable that is the target for my model is the IS\_SUCCESSFUL column from my application data frame. The variables that are the features of my model are every other column from the aforementioned application data frame. I discovered that because after I dropped the IS\_SUCCESSFUL column from the data frame it left me with whatever was left over to use as the centerpiece of the model. The Variables that should be removed from the input data are the EIN and Name columns. The two columns were removed because they were not targets or features in the dataset.

The number of neurons, layers, and activation functions that I selected for my model was eight in the first layer, and then 3 in the second layer. I was not able to reach the target accuracy score of 75%, as a matter of fact, I fell just short coming in at an accuracy score of 73.9%. In my effort to try and get to the goal of a 75% accuracy score, I added more layers, removed more columns, added additional nodes, and switched the activation functions associated with each layer.

The overall accuracy score was 73.9%, and if I had used greater correlation model, the accuracy score would have been higher. I also could have cleaned up more data, and do more activation functions with a different model.

This unit is a prelude to the final assignment of using big data, however, reflecting on this unit was interesting due to the fact that we were using python which is a tool that I am more than familiar with after everything that I have done and learned in this course. In conclusion, deep machine learning is intriguing because we get to nose dive into the complexities of how machines and other technologies operate.