**Overview**  
The goal of this analysis is to create and evaluate a model that predicts the success of applicants for funding by the nonprofit “Alphabet Soup.”

**First Attempt**

* We used a model with two inner layers and achieved a 72.59% success rate.
* Our goal was to exceed 75%, so we made changes to the model.

**Changes Made**

* We focused more on the applicant’s name, application type, and classification type.
* We added an extra inner layer to the model.
* We found that applicants whose names appeared 5 or more times had a higher chance of success, so we included the ‘NAME’ column in our analysis.

**Optimized Model**

* In the original model, we dropped the ‘NAME’ column, but in the optimized version, we included it.
* The optimized model achieved a 79.03% accuracy rate.

**Variable Details**

* **Target Variable**: “IS\_SUCCESSFUL” (True means success)
* **Featured Variables**: Application type, classification type, and ‘name’ in the optimized version.
* We removed the EIN variable as it was not needed.

**Summary**

* **First Attempt**: Used 2 neural nets and 2 layers, achieving 72.56% accuracy with 5741 parameters.
* **Second Attempt**: Used 3 neural nets and 3 layers, achieving 79.03% accuracy with 51471 parameters.
* The optimized model hit the target but increased the number of parameters significantly.
* A Random Forest Classifier might also work well for this task, as it classifies applicants using decision trees and averaging.