**Charity Funding Predictor Report**

**Overview:**

The purpose of this analysis was to examine a CSV file, containing more than 34,000 organizations that have received funding from Alphabet Soup over the years, to create an algorithm which would make predictions on whether funding would be successful for applicants.

**Results:**

Data Preprocessing:

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  Description automatically generatedColumns ‘EIN’ and ‘NAME’ were dropped from the DataFrame as both were non-beneficial.
* The target variable for this model was the ‘IS\_SUCCESSFUL’ column; 1 was YES and 0 was NO.
* The feature variables for this model were the remaining columns once ‘IS\_SUCCESSFUL’ was dropped.
* The pre-processed data was split into training and testing data.

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* Pd.dummies() was used to encode the categorical variables.

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Compiling, Training, and Evaluating the Model:

* Neural network was implemented with 3 layers.
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  Description automatically generatedThe desired target model performance of 75% and above was not achieved, generating an accuracy output of 73%.
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  Description automatically generated For optimization, column ‘NAME’ was kept in the DataFrame, which helped to achieve the desired model performance of 79%

Summary:

* To attain optimum accuracy of deep learning models, having a high number of parameters aids in obtaining a higher accuracy percentage.
* The presence of multiple layers within the model helps the computer to classify and predict the dataset better.