Report on the performance of the deep learning model for Alphabet Soup.

The nonprofit foundation Alphabet Soup wants a tool that can help them to decide and select the applicants for funding with the best chance of success in their ventures. This analysis can help predict whether applicants will be successful if funded by Alphabet Soup.

* Data Preprocessing

For this model target is get the accuracy of this analytical tool to more than 75% and the funded applicants success rate by using most of the remaining features after preprocessing.

We have used Classification and Application type were the features of this model and removed the metrics like EIN and Name which may not have a significant in deciding the funding or success rate during preprocessing.

* Compiling, Training, and Evaluating the Model

Neural network was used to compile, train and evaluating this model in both optimizations. In the optimization 1 we have removed 2 columns and used 2 nodes & 2 layers which did not result in the desired accuracy levels.

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For the optimization2, more layers were added along with different node levels to achieve an accuracy of +77%. To achieve this tried by increasing the no. of layers and the epoch up to 200.

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* Summary & Recommendations:

The summary of this exercise is by trying different models and layers along with removal of unnecessary columns is helping. Training and testing on different epoch level result in reducing the bias and will help the model perform with better accuracy. By binning of all the classification values may also improve the accuracy results. It may take more than one attempt in implementing multiple neurons 3 layers and 2 different activation functions helped to achieve the best accuracy of this NN challenge.