Overview

My objective was to identify similarities, differences, patterns, and relationships between two or more variables in order to gain a deeper understanding of the data.

Results:

Using bulleted lists and images to support your answers, address the following questions:

- Data Preprocessing
 - What variable(s) are the target(s) for your model?
 - accuracy
 - What variable(s) are the features for your model?
 - CLASSIFICATION
 - What variable(s) should be removed from the input data because they are neither targets nor features?
 - "EIN", "NAME"
- Compiling, Training, and Evaluating the Model
 - How many neurons, layers, and activation functions did you select for your neural network model, and why?
 - I used 43 neurons, 3 layers, and used both relu and sigmoid for the activation. I didn't want the number of neurons to exceed the number of training instances to avoid overfitting.
 - Were you able to achieve the target model performance?

- I blive I was able to find the model accuracy I was looking for throught trial and error.
- What steps did you take in your attempts to increase model performance?
 - To start with I chose a small number of neurons and layers and gradually increase them if the performance was not satisfactory.

Summary:

A gradient boosting machine (GBM), which combines multiple weak models into one strong model that accurately predicts a target variable, works by combining multiple weak models. Because they can handle both numerical and categorical features and can handle missing data automatically, they are particularly useful when dealing with high-dimensional and complex data.