**Mod 21 - Analysis of Neural Network Model for Charity Funding Prediction project**

**Purpose of the Analysis**

The purpose of this analysis is to develop and evaluate a neural network model designed to predict the success of funding applications for charitable organizations. This model aims to identify key factors influencing the success of these applications to aid in the decision-making process for funding allocations.

**Results**

The model showed a steady decrease in loss and increase in accuracy over the modules. Final evaluation on test data resulted in a loss of approximately 0.5658 and an accuracy of approximately 72.42%. The model achieved an accuracy of 72.42% on the test set, stating its effectiveness in predicting the success of funding applications. The analysis identified key features contributing to the prediction, such as application type and classification.The current model may be limited by the size and quality of the dataset. Maybe overfitting due to the high number. A Random Forest model could be used as an alternative. It handles categorical variables well and can provide feature important scores.

**Conclusion**

The neural network model successfully predicts the success of funding applications with reasonable accuracy. However, there is potential for more improvement by exploring alternative models like Random Forest, which could offer better methods and performance. Future work could involve better tuning and including more features to enhance the model's predictive capabilities.