**CONCLUSION**

The project aims to achieve a high level of accuracy and precision in the predictions to help the company make informed decisions about approving loans. Based on the analysis, we can conclude that the Random Forest Classifier and Decision Tree Classifier performs the best on this dataset, with a testing accuracy of 0.8713 for both the models; and a precision of 0.88 and 0.87 respectively. This means that Random Forest Classifier correctly identifies 88% of the loan applications that will be approved and Decision Tree Classifier correctly identifies 87% of the loan applications that will be approved. However, there is still room for improvement, as the precision can be increased further by optimizing the hyperparameters and using feature engineering techniques to select the most relevant features.

Overall, this project provides a good example of how machine learning can be used to predict loan approval status and assist financial institutions in making informed decisions. By using various classification models and evaluating their performance using appropriate metrics, we can identify the best model and improve the accuracy of the loan approval process.

**RECOMMENDATIONS ABOUT THE PROJECT**

Based on the analysis of this project, here are some recommendations:

* It is recommended to use more advanced feature engineering techniques to improve the performance of the models. This can include creating new features from existing ones, applying transformations, or incorporating external data sources.
* It is important to gather more data, particularly from rejected loan applications, to improve the representativeness of the dataset and enhance the accuracy of the models.
* Collecting more relevant data from the Company such as Interest Rate or type of loan, age of the applicants, etc can give us more insights which may further increase the model accuracy.
* Using more advanced machine learning algorithms: More complex algorithms like Neural Networks and Deep Learning can be used to build more accurate models.
* There should be regular monitoring and updating of the models as the performance of the models may degrade over time as new data becomes available.
* Finally, it is recommended to integrate the model into the loan application process and evaluate the impact on the approval process over time to ensure that the model is meeting its intended purpose and not introducing any unintended biases.