DEPARTMENT OF APEX INSTITUTE OF TECHNOLOGY

# PROJECT PROPOSAL

## Project Title: - Predictive Modeling for Loan Approval Rates

## 2. Project Scope: -

## This project proposes a novel approach to classification problem where we have to predict whether a loan will be approved or not. Specifically, it is a binary classification problem where we have to predict either one of the two classes given i.e. approved (Y) or not approved (N). Another way to frame the problem is to predict whether the loan will likely to default or not, if it is likely to default, then the loan would not be approved, and vice versa. The dependent variable or target variable is the Loan\_Status, while the rest are independent variable or features. We need to develop a model using the features to predict the target variable.

**Loan prediction is a very common real-life problem that every retail bank faces in their lending operations. If the loan approval process is automated, it can save a lot of man hours and improve the speed of service to the customers. The increase in customer satisfaction and savings in operational costs are significant. However, the benefits can only be reaped if the bank has a robust model to accurately predict which customer's loan it should approve and which to reject, in order to minimize the risk of loan default.**

**They have presence across all urban, semi urban and rural areas. Customer first apply for home loan after that company validates the customer eligibility for loan. Company wants to automate the loan eligibility process (real time) based on customer detail provided while filling online application form. These details are Gender, Marital Status, Education, Number of Dependents, Income, Loan Amount, Credit History and others. To automate this process, they have given a problem to identify the customers segments, those are eligible for loan amount so that they can specifically target these customers."**

## 3. Requirements: -

* Hardware Requirements

1. PC / Laptop
2. Keyboard
3. Mouse

* Software Requirements

1. Anaconda Navigator

2. Jupyter Notebook

3. Sublime Text

**STUDENTS DETAILS**

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| **Name** | **UID** | **Signature** |
| JAIN KARAN ANAND | 21BCS8804 |  |
| VATHADA LIKHITH SAI | 20BCS4593 |  |
| MITALI GUPTA | 20BCS6890 |  |
| HITESH GARG | 20BCS6614 |  |

**APPROVAL AND AUTHORITY TO PROCEED**

We approve the project as described above, and authorize the team to proceed.

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| **Name** | **Title** | **Signature**  **(With Date)** |
| Prof. Pramod Vishwakarma (E9758) | Supervisor |  |