**Introduction**

In the ever-evolving landscape of modern society, technology has become the cornerstone of human existence, significantly enhancing the quality of life that is lead. Each day brings forth new innovations and solutions to address the myriad challenges that are faced. One such domain where technology has made a profound impact is the banking sector, where it has revolutionized the way loans are approved and managed.

In the contemporary banking milieu, loan approval is a pivotal process that relies on historical data and advanced machine learning algorithms to make informed decisions. As the number of loan applicants continues to surge, banks face the challenge of managing limited funds while ensuring that loans are granted to deserving candidates. This is where the predictive power of machine learning algorithms comes into play.

This project delves into the critical role played by machine learning models such as logistic regression, decision tree classifier in making accurate predictions regarding loan approvals. The core objective of this research is to leverage historical data to train these models, ultimately enabling banks to predict whether a new loan applicant should be granted credit.

**DATA COLLECTION**

Data Collection is one of the most important process of collecting and analyzing information on relevant data’s in a predetermined and in methodological way. It's firmly understood that the right data, can provide a clear view of the past, in that it can identify learning’s from and in some cases, predict what might happen in the future.

**DATASET DESCRIPTION**

Dream Housing Finance company deals in all home loans. They have presence across all urban, semi urban and rural areas. Customer first applies for home loan after that company validates the customer eligibility for loan.

The 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. Here they have provided a partial data set.