# Deep Learning with Keras and Tensorflow

## Course-End Project

# Home Loan Data Analysis

**Problem Statement:**
For a safe and secure lending experience, it's important to analyze the past data. In this project, you have to build a deep learning model to predict the chance of default for future loans using historical data. As you will see, this dataset is highly imbalanced and includes a lot of features that make this problem more challenging.

**Objective:** Create a model that predicts whether or not an applicant will be able to repay a loan using historical data

**Domain:** Finance

**Analysis to be done:** Perform data preprocessing and build a deep learning prediction model

**Steps to be done:**

1) Load the dataset that is given to you
2) Check for null values in the dataset
3) Print the percentage of default to a payer of the dataset for the **TARGET** column
4) Balance the dataset if the data is imbalanced
5) Plot the balanced or imbalanced data
6) Encode the columns that are required for the model
7) Calculate sensitivity as a metric
8) Calculate the area under the receiver operating characteristics curve