

# CrediTech

Your First Step to A Better Financial Future

Project link : <https://github.com/iamdas3/ME-781-project>

## ABOUT US



A startup started by a group of 5 members working in the credit industry for its betterment using a proper data-driven approach by our highly skilled and trained ML Engineers.

Our Target is Empowerment of the financial sector with less risk and more profit

Our Goals for the years ahead: To partner up with Credit Bureaus and Banks and help individuals throughout the world for achieving their credit goals

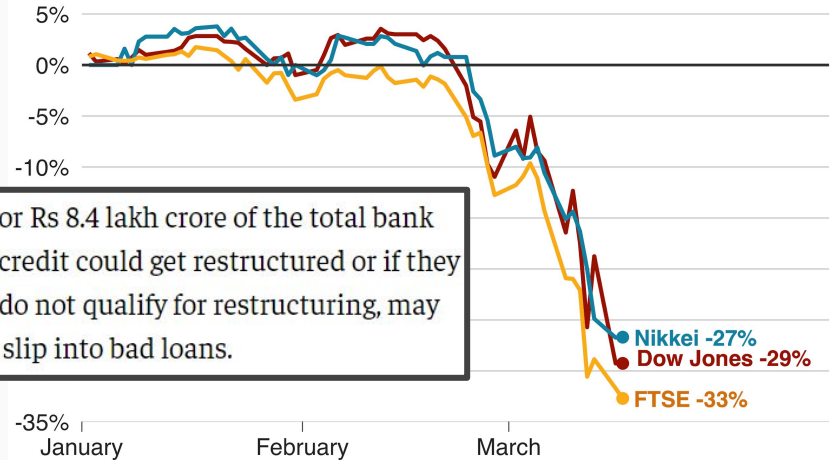
# The problem

**Cash crunched due to COVID-19? Banks may extend a loan restructuring lifeline to borrowers**

Bank Credit card defaults rates have always been a major problem for banks and other lending financial institutions.

Given the current scenario where the majority of the earning group is hit by a pandemic hence observe a job loss or pay cut, therefore Credit defaults rates are likely to increase

**Coronavirus impact on stock markets since the start of the outbreak**



or Rs 8.4 lakh crore of the total bank credit could get restructured or if they do not qualify for restructuring, may slip into bad loans.

Source: Bloomberg, 17 March 2020, 13:00 GMT

# Continued

The already established scores like CIBIL might not be useful in the current situation due to the above given problems

Hence, we need to consider many other factors and find out what exactly affects the credit capacity and what steps can be taken to improve it.



# Our Objective:

To provide a bias free factor for determining the creditworthiness of an individual



# The solution

Using Machine Learning models using the financial and general information of an individual.

Finding the relevant factors involved in the process and take steps towards improvement using the obtained knowledge

# How it works

## Step 1

Collection and  
Preprocessing of data  
and Relevant Feature  
selection

## Step 2

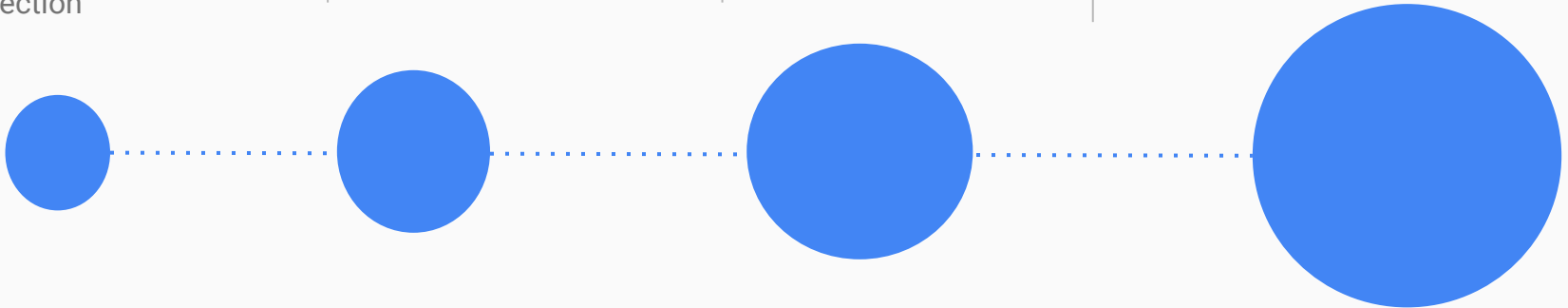
Model Training and  
accuracy comparison  
for Model selection

## Step 3

Optimizing  
hyperparameters for  
improving accuracy

## Step 4

Studying obtained  
information and setting  
goals for the future.



# Extensive Details

We have performed a thorough exploratory data analysis on the dataset, The dataset contains general information and a few months of bills, payments and payment status for the same. Visualized the default rate variation with the features and provided a correlation matrix.

Logistic Regression is used as a benchmark and several other models have been implemented for comparison including Naive Bayes, K-NNs, Decision Trees, Random Forest Models.

Performance measures like Accuracy, Precision, Recall and F1-score are Compared for every model and they are further improved using Hyperparameter tuning, Gradient Boost and Adaboost



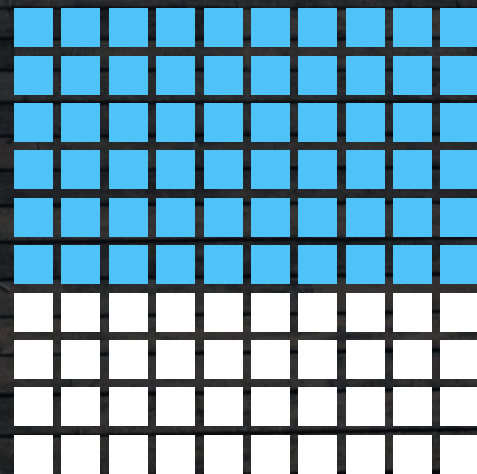
What  
Differentiate us  
from others

Our Expert ML Engineers

We provide simple and innovative  
solutions

We are focused to achieve the goal

# Thank you for your attention



For further questions/assistance:

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