INCDEDIBLE HACK

CREDIWATCH

SKILLENZA

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1. Abstract

Identify the eligible business(es) to which banks can lend loan with minimum risk of running into bad loans.

Compared to personal loans, the risk of providing loans to businesses is very high. Hence, crediwatch collects the necessary information and analyse the credit worthiness of the particular business and gives this information to the lending banks/financial institutions.

2. Assumptions

1. Data is uploaded only in csv files.
2. The format of the data shared in csv files remains consistent.
3. Analysis of Loan/No-Loan is done only for those companies for which the data is available.
4. No business can ask loan for more than 10 crores INR. Any amount over this is auto disqualified.
5. High importance is given to the value calculated using the formula for x1-x5 columns.

3. Scope

3.1. In Scope

1. Fetching the csv files and storing in the database
2. Collecting business data for analysis
3. API calls

3.2. Out of Scope

1. Beautification of html files using CSS/graphs/images etc
2. Accuracy of the model used for deciding whether to give loans or not

4. Tools

1. Python Libraries: pandas, pymysql, mysql, sqlalchemy, flask, werkzeug
2. Database: mysql
3. API calls: Flask

5. Approach

Create a html page for uploading the csv file. Fetch this data using API calls written using Flask and push the data as it is into mysql database.

Create another html page to capture business information like the name of the company or CIN, loan amount, tenure of the loan, turn over of the company in the previous year, surety amount. Capture this information using an API call using flask.

If the company name does not exist in the database, then send an error message saying the company details does not exist. If the company details exist, then do the following analysis:

Create a new column ‘score_calc’ using the formula 0.717*x1 + 0.847*x2 + 0.42*x4 + 3.107*x3 + 0.998*x5. High importance is given to this derived value.

Calculate the eligibility amount using the formula -

(turnover*0.1 + score_calc*25,000 + surity)

Calculate the amount the organization can pay normalized annually –

(paidup_capital + loan amount/tenure in years).

If the eligibility amount is more than the loan calculated amount, then the business can be given loan otherwise it is advised to reject.

Save the business details and the loan acceptance/rejection details in mysql db

6. Feasibility

1. As the details of x1-x5 are unknown and most of the other details are not very relevant for deciding whether a loan should be processed or not, the model accuracy may be not as desired
2. Information like the investor details, company's future growth plan, turnover, performance in the share market etc can play a major role in deciding whether a loan can be given or not