Team ID: PNT2022TMID35604

Problem-Solution fit canvas 2.0

Project Title: Smart Lender-Applicant Credibility Prediction for Loan Approval

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Who is your customer?
i.e. working parents of 0-5 y.o. kids

1. Investment firms
2. Venture Capitalists
3. Entrepreneurial incubation firms
4. Banks

6. CUSTOMER CONSTRAINTS — CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

A financial institution's credit applications process is complicated and involves a lot of paperwork. Loan defaulters may go unnotices by banks. They might lend him money as a result, exacerbating the loss.

5. AVAILABLE SOLUTIONS — AS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

Models:
1. Decision Tree Model
2. Random Forest Model
3. KNN model
4. Xgboost Model

Creating an application that uses any of these ML models to predict the loan eligibility of person.

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

The importance of a 24-months history of employment is very important in the loan approval. If someone has been self-employed for less than 2 years and only has the business license for 18 months that could be a problem.

9. PROBLEM ROOT CAUSE — RC

What is the real reason that this problem exists?
What is the back story behind the need to do this job?
i.e. customers have to do it because of the change in regulations.

The root cause of this problem is due to improper verification of data which might happen during manual checking.
Evaluating and giving credit to customers is a difficult process that requires multiple evaluations. Wrong predictions can cost Bank big losses.

7. BEHAVIOUR — BE

What does your customer do to address the problem and get the job done?
i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

The outcome would be loan approval for ineligible candidates. Later could result in loss for the organization

Focus on J&P, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS — TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

Money repayment delay and loss due to approval of loan for ineligible candidates

4. EMOTIONS: BEFORE / AFTER — EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

Unwanted financial issues in bank money rotation cycle. After resolving the issue regular circulation of money would continue.

10. YOUR SOLUTION — SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

Our Solution involve using ensemble ML models which can predict the loan eligibility in the banking sector. It will also include an application framework that uses this ML model and some UI/UX to provide the results directly to the customers.

8. CHANNELS of BEHAVIOUR — CH

8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

The online way of action would be sending notice regarding deadline.

8.2 OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

Offline way would deal with directly approach to the client for collection of money.

Extract online & offline CH of BE