

# NullPointer SmartLender

[www.nullpointer.in](http://www.nullpointer.in)

# Introduction

- NullPointer is a data analytics company based in New Delhi, India. We develop artificial intelligence algorithms deployable across sectors including fintech, social networks, insurance and telecom.
- Our solutions combine the latest developments in the field of AI and novel mathematical approaches making them efficient and less data intensive

# The Team



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# Problem

- Over the past few years, AI has started making inroads into financial sector from lending to trading
- According to CB Insights, fintech firms closed funding 496 deals worth \$8 billion in 2016, a [record high](#)
- In the space of lending, the evolution of alternative credit scoring has opened new avenues for use of AI
- However, there is long way to go in adoption and optimisation of AI solution of ALC in India

# Solution

- Our algorithm learns how to segregate good and bad borrowers on the basis of repayment behaviour
- From historical data, it predicts which characteristics affect whether or not someone will pay back on time
- Our algorithm has been trained on the [Lending Club](#) dataset, widely used around the world to benchmark their solutions lending applications
- In this case, our solution uses fields such as employment length, type of home ownership, term of the loan to gauge creditworthiness

# Challenges

- The primary challenge in the Indian scenario is access to structured and quality banking data
- The Lending Club dataset, even though representative generally, is not characteristic of the Indian borrower
- The data of no-file clients, who have not yet accessed credit, is not generally available
- AI is a data-based predictive solution therefore it is prone to biases that may segregate borrowers on the basis of characteristics that may be immaterial

## Mutual benefits

- By accessing the APIs and mentorship that from companies in the sector provides we will be able to build an optimised solution for the Indian borrower.
- Our solution will help companies in evaluating the potential of using AI to augment its lending business – making it a win-win situation for both the lenders and NullPointer
- Will use minimally intrusive data collection methods including social media profiles etc. to gain information about no-file clients
- As far as the biases emanating from AI algorithm is concerned, we give such variables appropriate consideration by using deep learning techniques

# Business Model

## **PART ONE**

Target lending companies including banks, credit facilitators, peer-to-peer lenders through demos at minimal fees

## **PART TWO**

After successful conversion of clients, provide them with a full-fledged solution that will be charged through licensing or commission-based model

## **PART THREE**

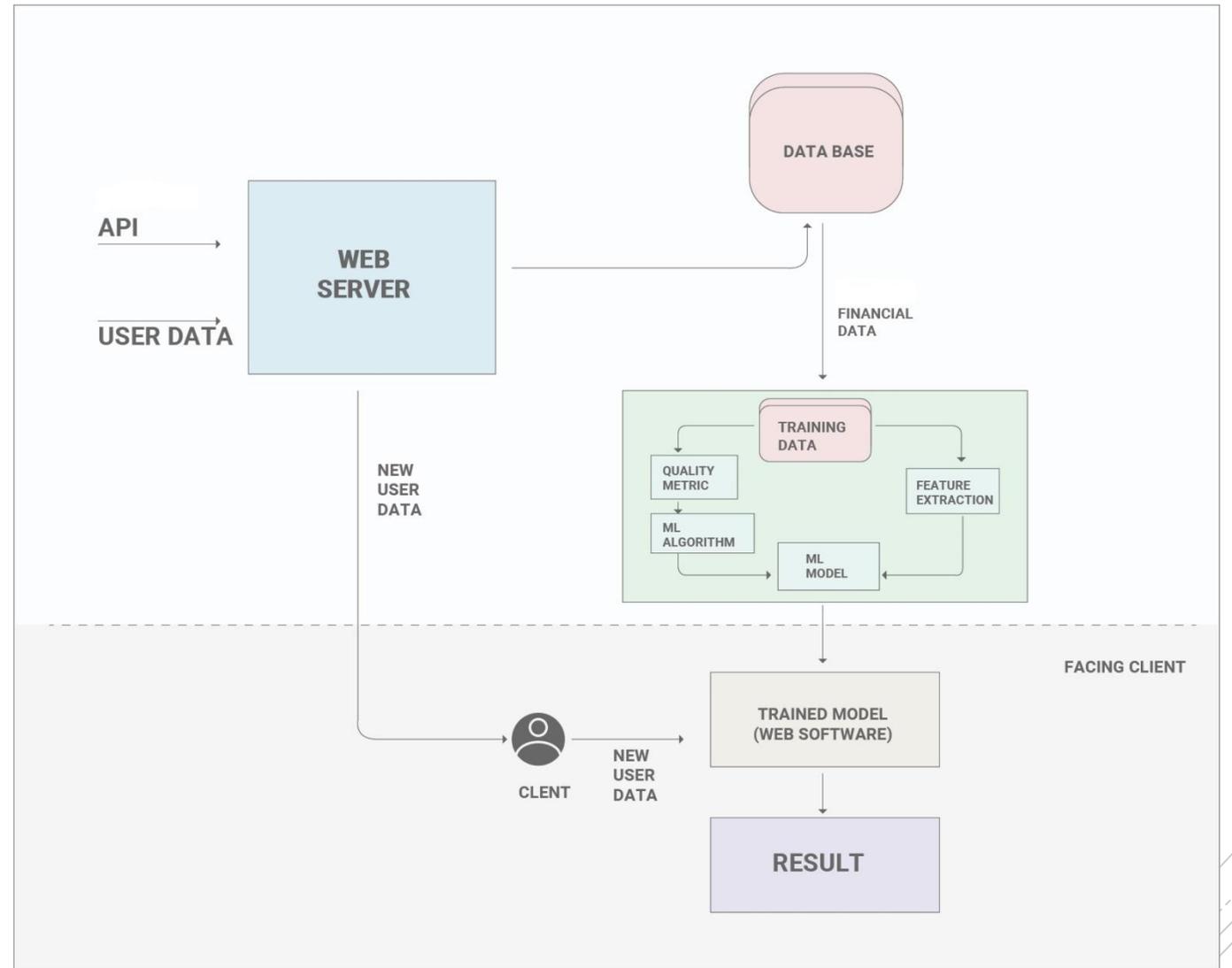
Sustain revenues through regular value addition to the solution and maintenance services

## Illustrative timeline

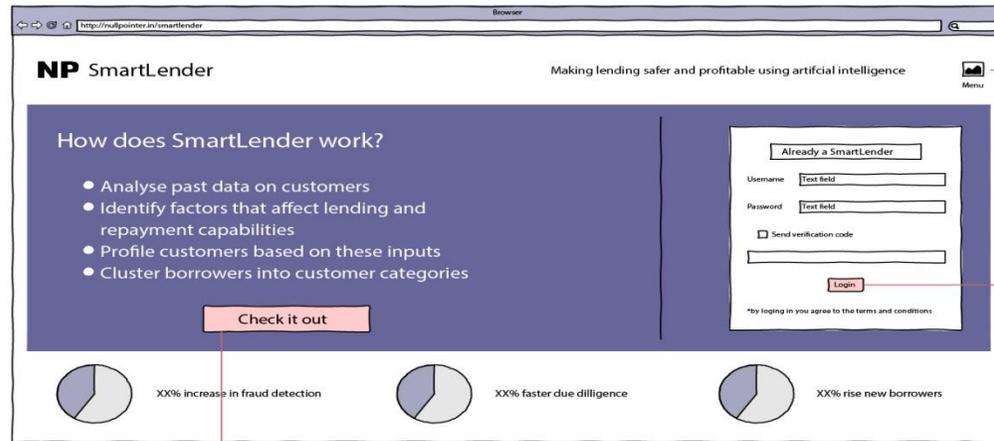
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- Dec 1, 2017 Access APIs. Start work on MVP
  - Dec 31, 2017 Train AI model. Put in place back-end and front-end infrastructure
  - Jan 31, 2018 Fine tune solution. Refine product packaging, functioning using expert advise
  - Feb 28, 2018 Deliver final, deployable solution

**\*Dates tentative. May vary on the basis of prevailing circumstances**

# High-level architecture of solution



# Wireframe of solution

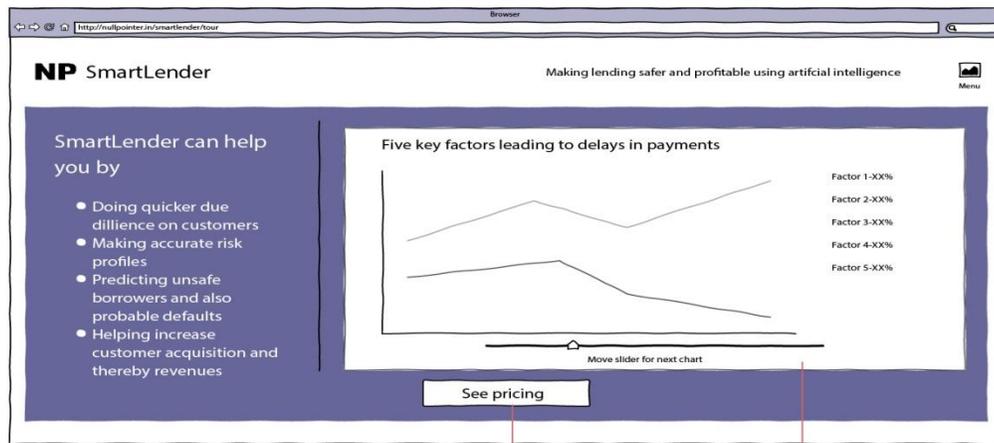


Will have options to login, check pricing, see analysis etc.

## Performance of the solution in terms of key metrics

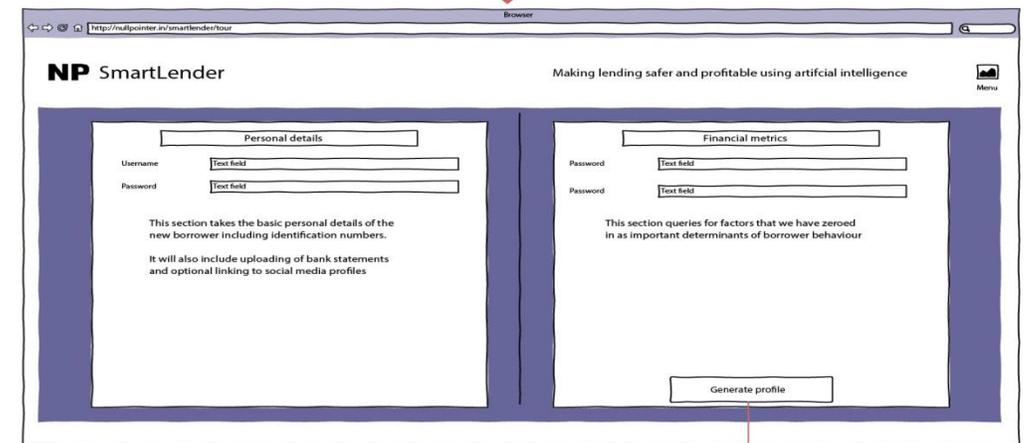
Gives brief overview of solution

Takes user to the new borrower details window. Login required as API not free and contains sensitive financial information



Charts will give results of our analysis on the basis of different paramters

Generates a pop-up window that gives prices



This will generate a report card based on key metrics for the borrower that can be saved

## Market/ Competition

### **CREDIT FACILITATORS**

Companies such as IndiaLends, CreditMantri etc. help profile borrowers on the basis of their credit score augmented by additional data. They deploy experts and data analytics to help build these profiles. There is scope to improve their solutions through AI

### **PAYMENTS BANKS, M-WALLETS**

Payments Banks, 11 of which were given licenses by RBI last year, that use technological infrastructure such as mobile, internet along with mobile wallets and payments systems will be huge data generators. They can leverage AI to improve customer engagement and offer better products

### **CONVENTIONAL BANKS**

Conventional banks will be the biggest beneficiaries of AI as they have the volume of data to support optimal prediction as well as the distribution channels. Also, they have the monetary resources to deploy the cutting edge of AI

# Contact

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