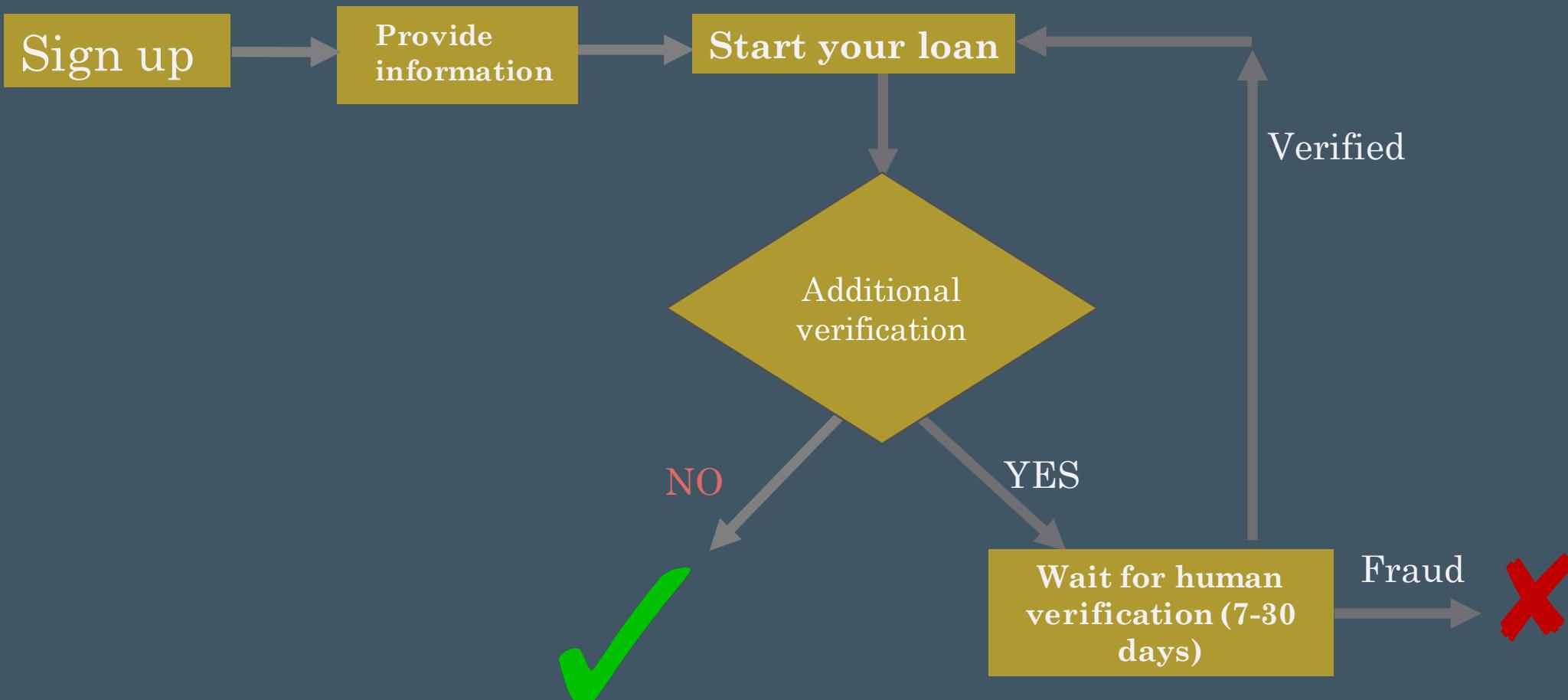


# Lendeviance

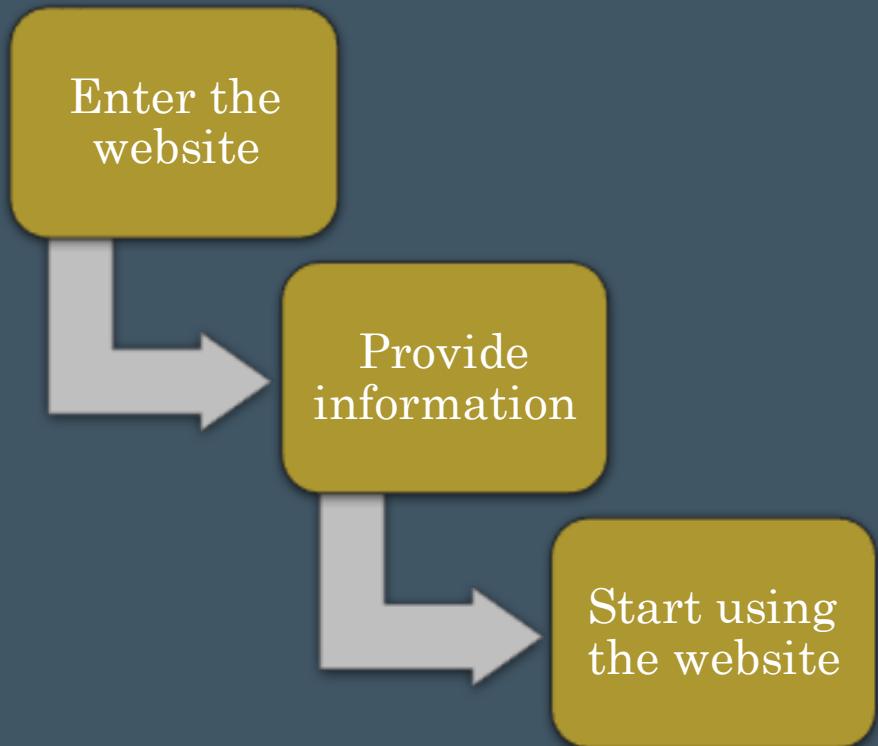


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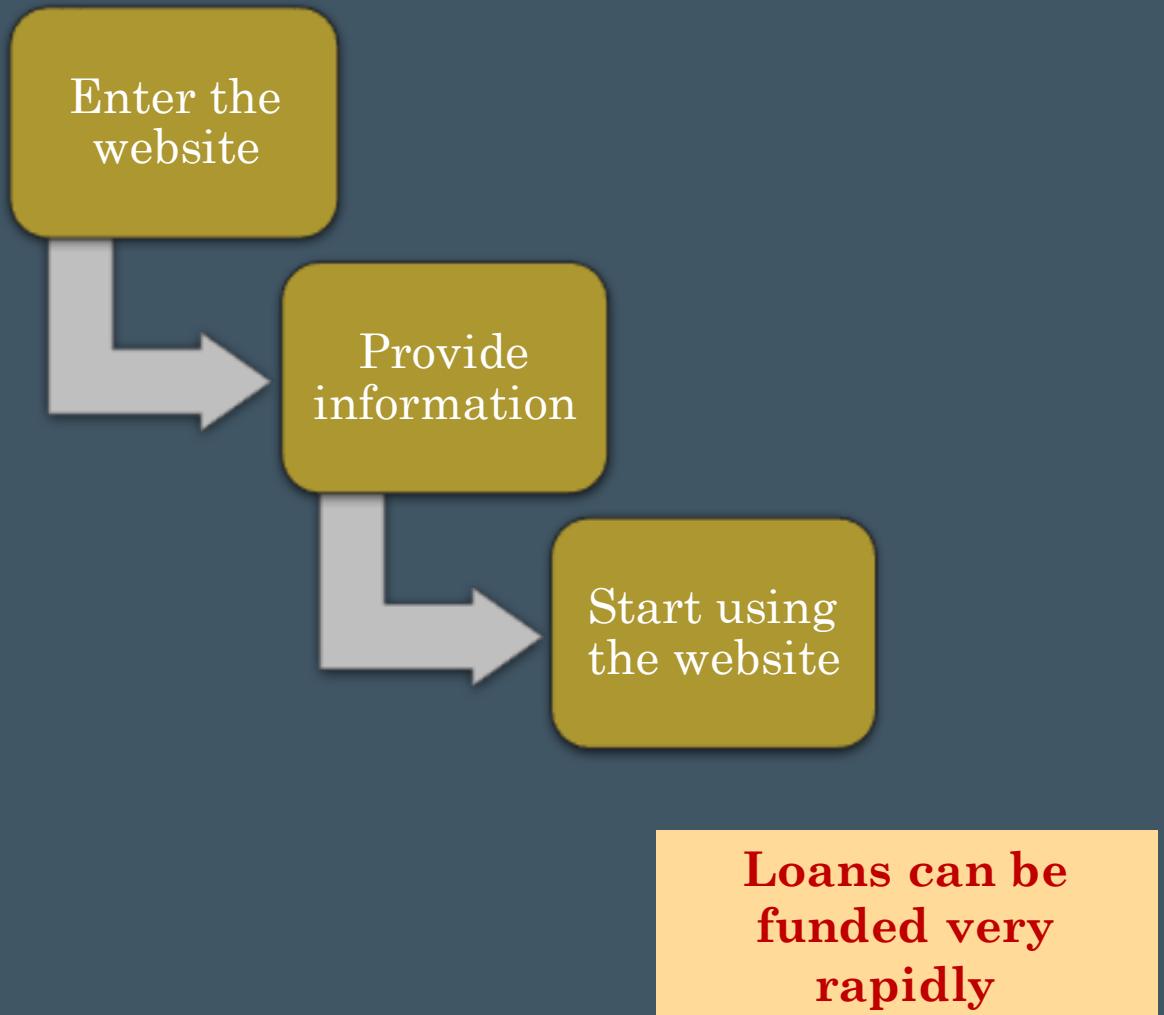
# Problem:



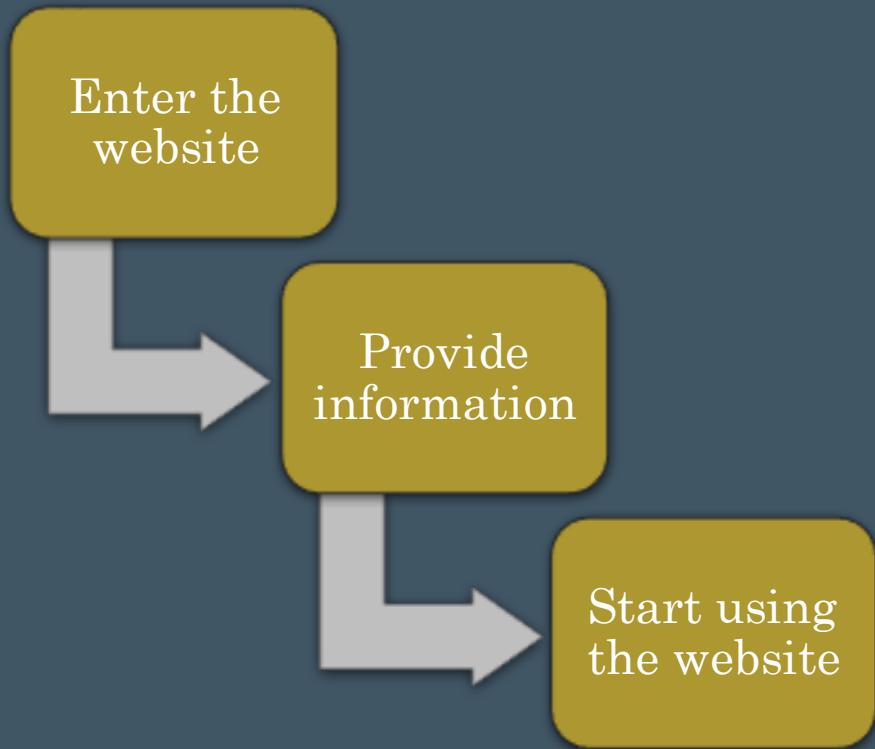
## Current Lending clubs' sign up flowchart



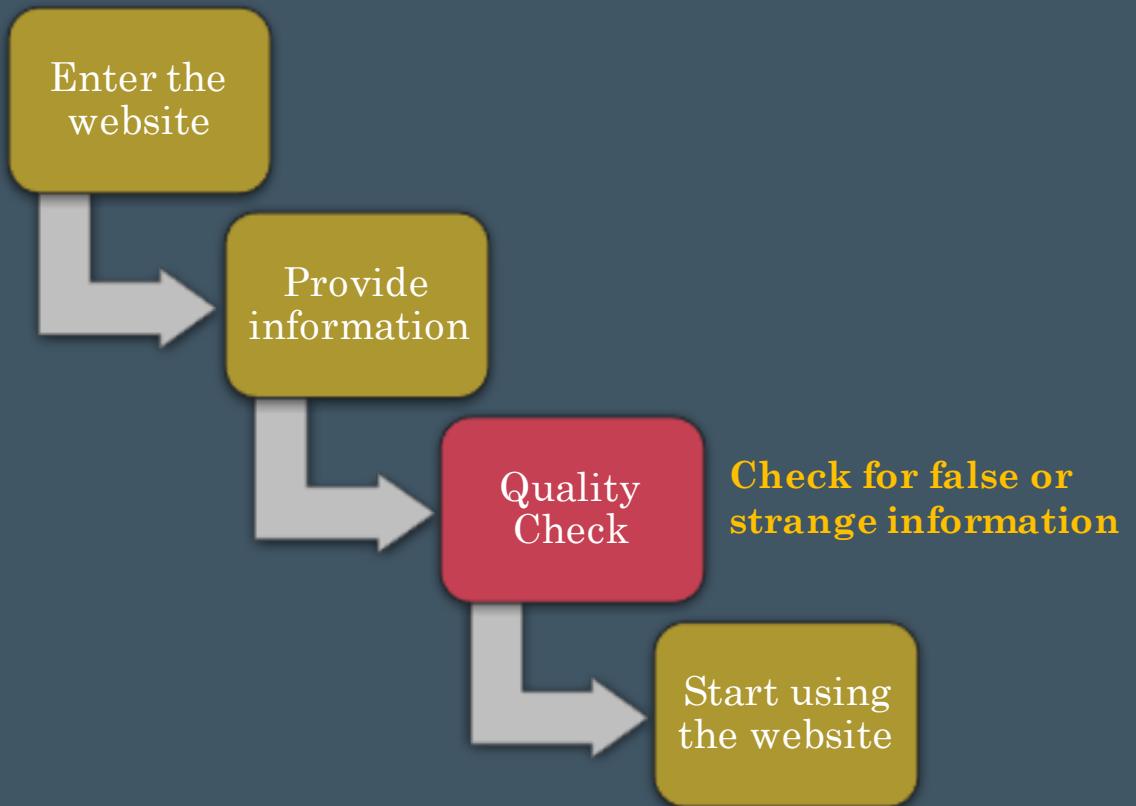
## Current Lending clubs' sign up flowchart



## Current Lending clubs' sign up flowchart

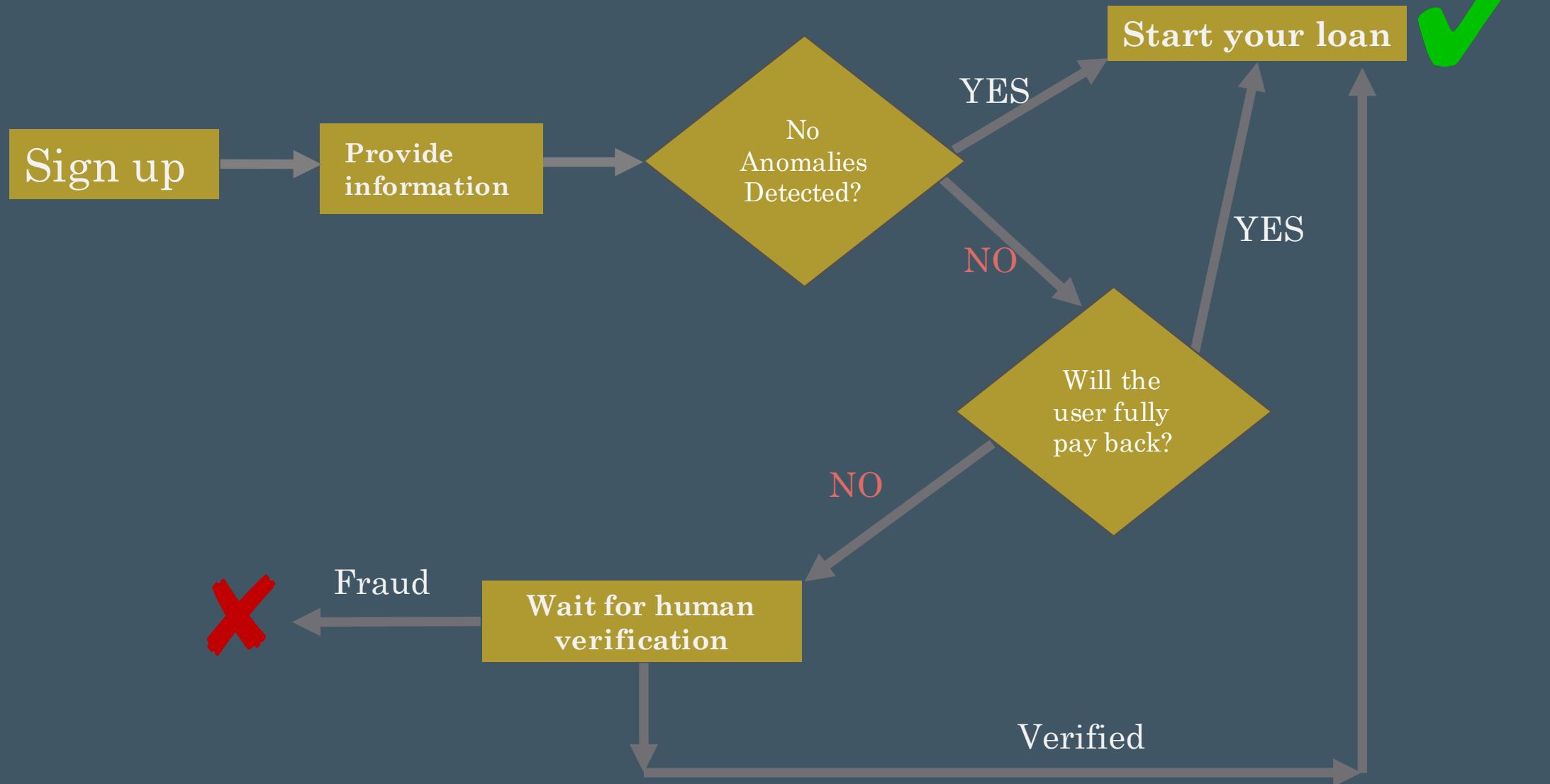


## More efficient sign up flowchart



High Quality Sign ups

# Lendeviance



# What are some of the examples of user's information?



Users give information such as:

- Loan Amount
- Annual Income
- Term
- Job title
- Years of experience
- Home ownership
- Zip code
- ...



Lending Club automatically calculates:

- Interest Rate
- Grade
- Monthly amount to pay
- Late fees
- Loan Status
- ...

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Lending Club automatically calculates:

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I also added IRS median salary for zip code data

# What are some of the examples of user's information?



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Lending Club automatically calculates:

- Interest Rate
- Grade
- Monthly amount to pay
- Late fees
- Loan Status
- ...

Total of 120

Imagine how many false information can be there!



# Lendeviance Demo!

Imagine you are the lending club employee that needs to verify users ...

[Click here](#)

# Analysis

## Random Forest

Goal : Find important features

Parameters used:  
• class\_weight=balanced  
• min\_samples\_split=5

25 Features

Classes (Fully Paid / Late)

Rows  
~37000



False Positive:  
False Negative

# Important Features



- 1) Annual Income
- 2) Median Salary in their Zip Code
- 3) Loan Amount
- 4) Loan Term
- 5) Credit cards (open/total)

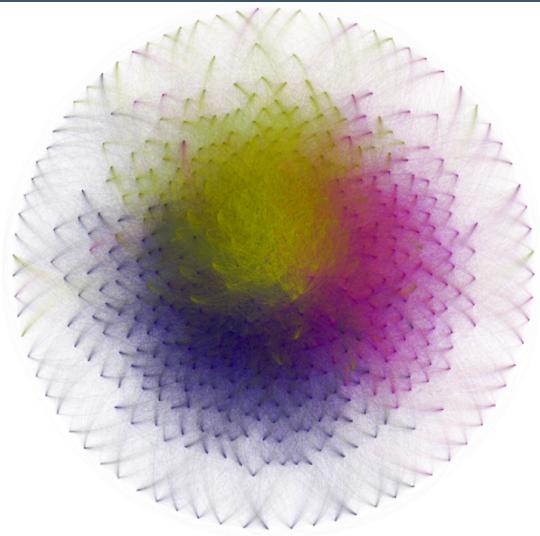


Create a **weighted function** and assign **coefficients** for each case.

# Finding the Anomalies:

- Look at the distribution;

# Thanks!



ladandoroud



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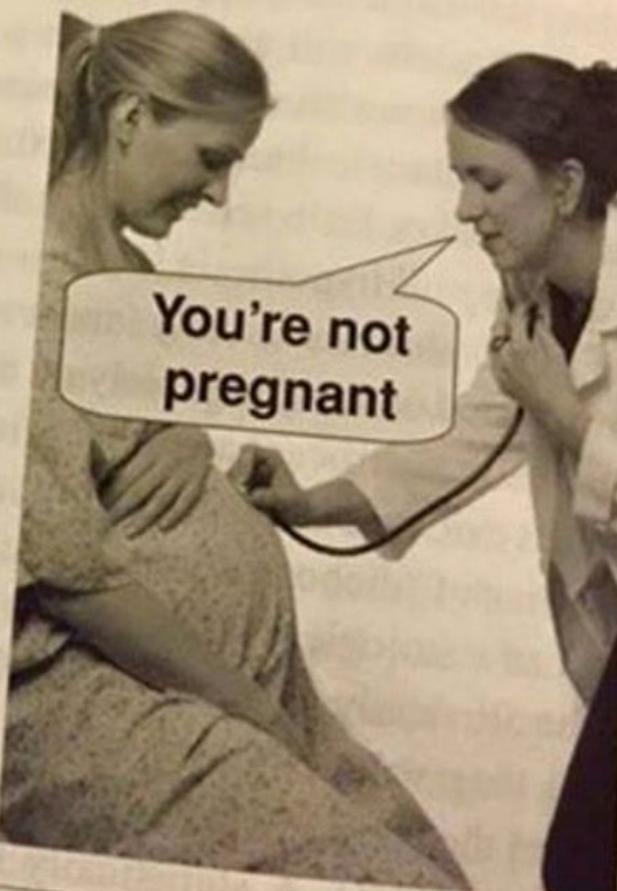
@ldoroud



Type I error  
(false positive)



Type II error  
(false negative)



3.1 Type I and Type II errors