



# GivaMe! Evaluate Your Kiva Campaign

Chao Li  
Insight 2019B

# Kiva.org: world's first micro-lending platform



**37%** funded

**Fundraising period:**  
30 days

29 days left

\$3,775 to go

Total loan: \$6,075

Powered by 44 lenders

## Allison Tereza



Lima, Peru / Higher education costs

\$25 ▾

**Lend now**

### Allison Tereza's story

Allison is young Graphic Design student at Senati. She lives with her parents. Her mother is a seamstress and her father sells tennis shoes.

She is studying Graphic Design because she likes the idea of capturing her's and other's ideas into something concrete or digital. The idea of helping others makes her very happy also that her creations are admired by others makes her excited and proud.

When she finishes her career, she would like to capture her ideas into banners or ads created by her and her Graphic Design business, showing the world what she can do through her talents and what she has learned.

She started 4 months and she will graduate in 2 more years.

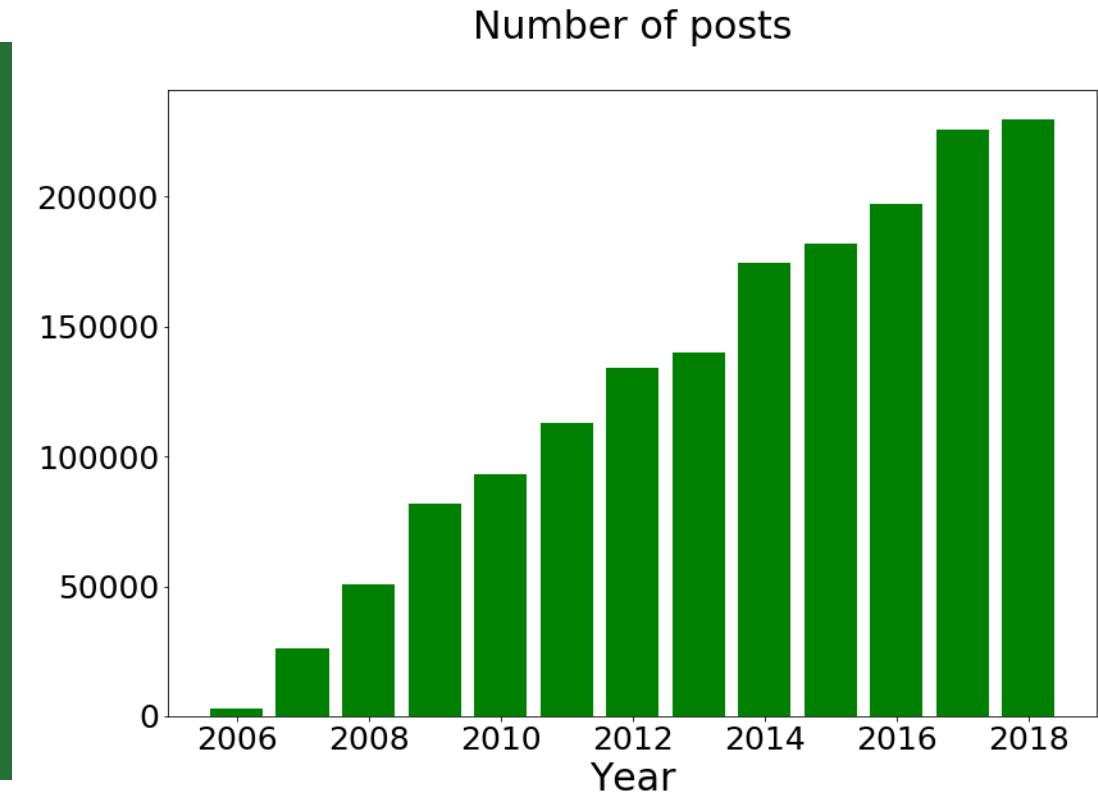
The biggest obstacle that jeopardizes her continuing with her studies is the family economy as they are going through some hardships that won't allow her to fight for her dreams.

Allison is very happy and excited that others believe in her, that is why she wants to dedicate some words to KIVA's supporters: "thank you for believing in me, I will give my 100% and won't disappoint you and I assure you that you have made the best investment. Many thanks for helping me achieving my dream, to continue studying to become a professional"

# Needs: Number of non-funded Kiva loans are increasing!

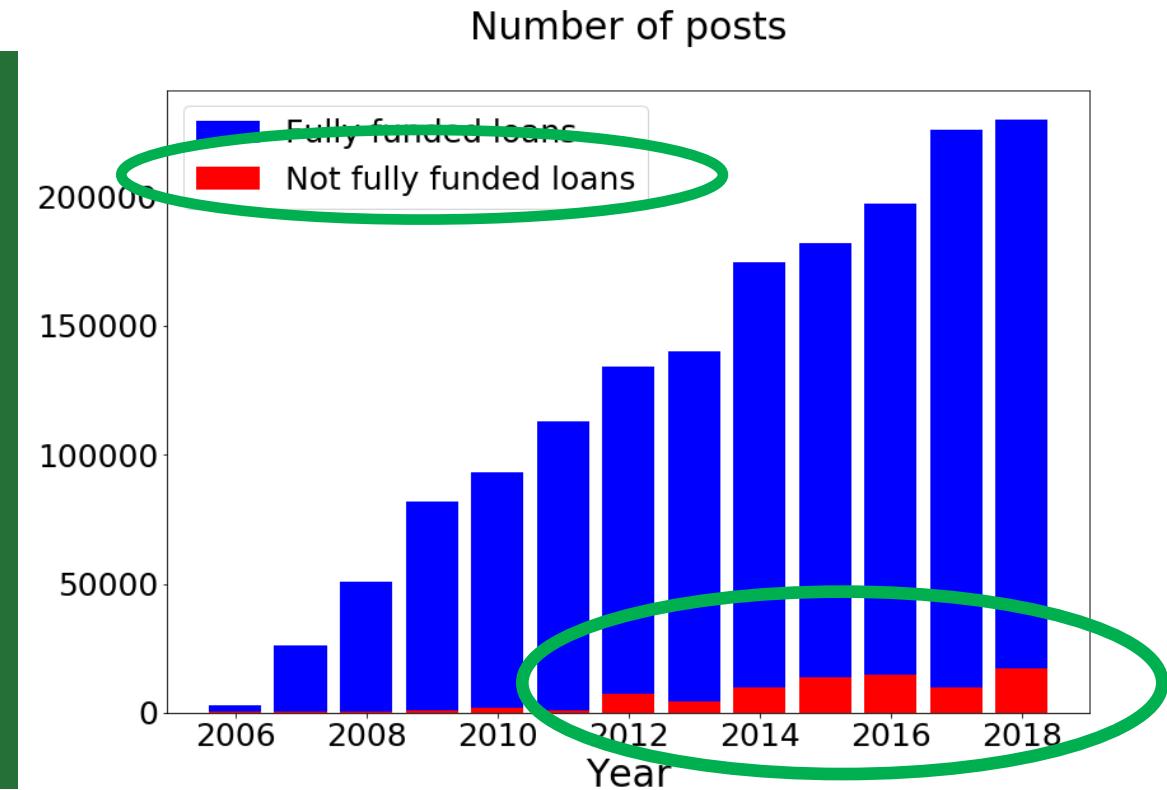


3



# Needs: Number of non-funded Kiva loans are increasing!

4

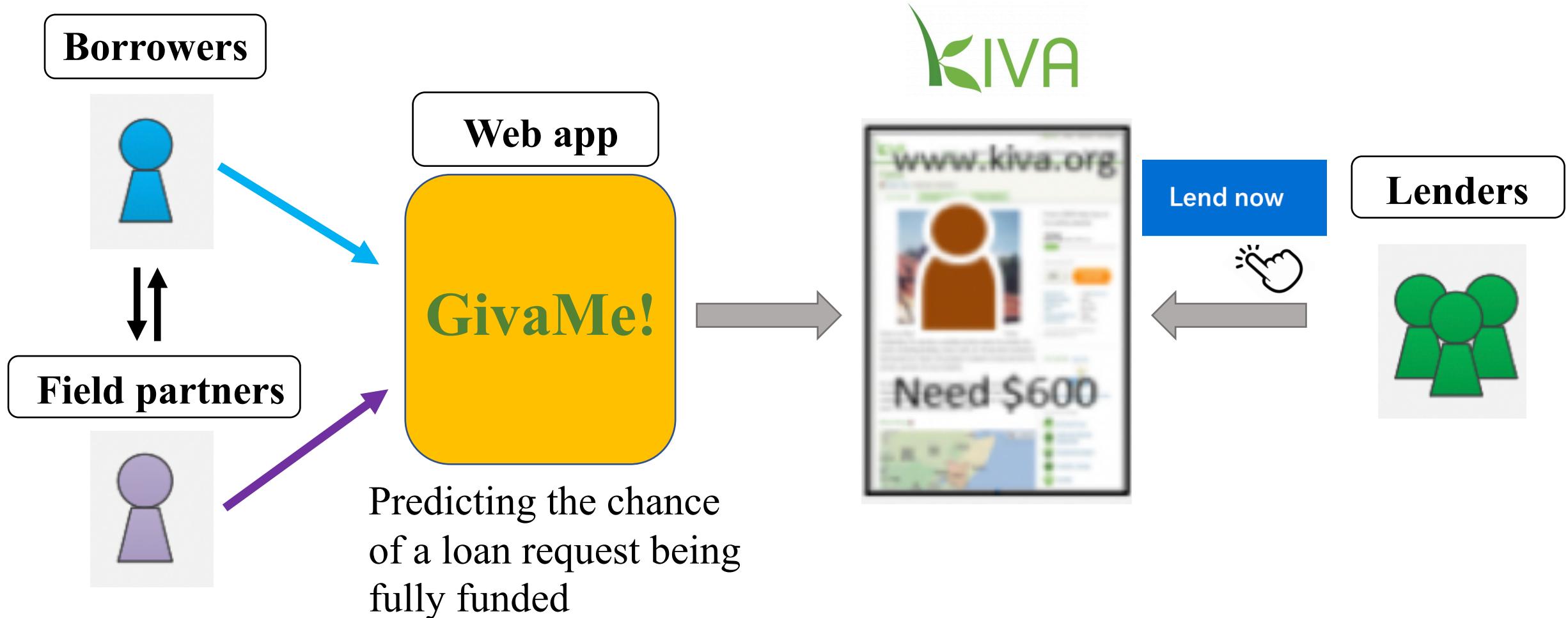


# Proposed solution

5



# Proposed solution



# Baseline model



## Features from Kiva website:

### Borrowers

- Number of female
- Number of male

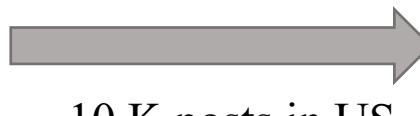
### Field partners

- Directly
- With field partners

### Loan details

- Loan amount
- Loan use
- Loan term
- Repayment method

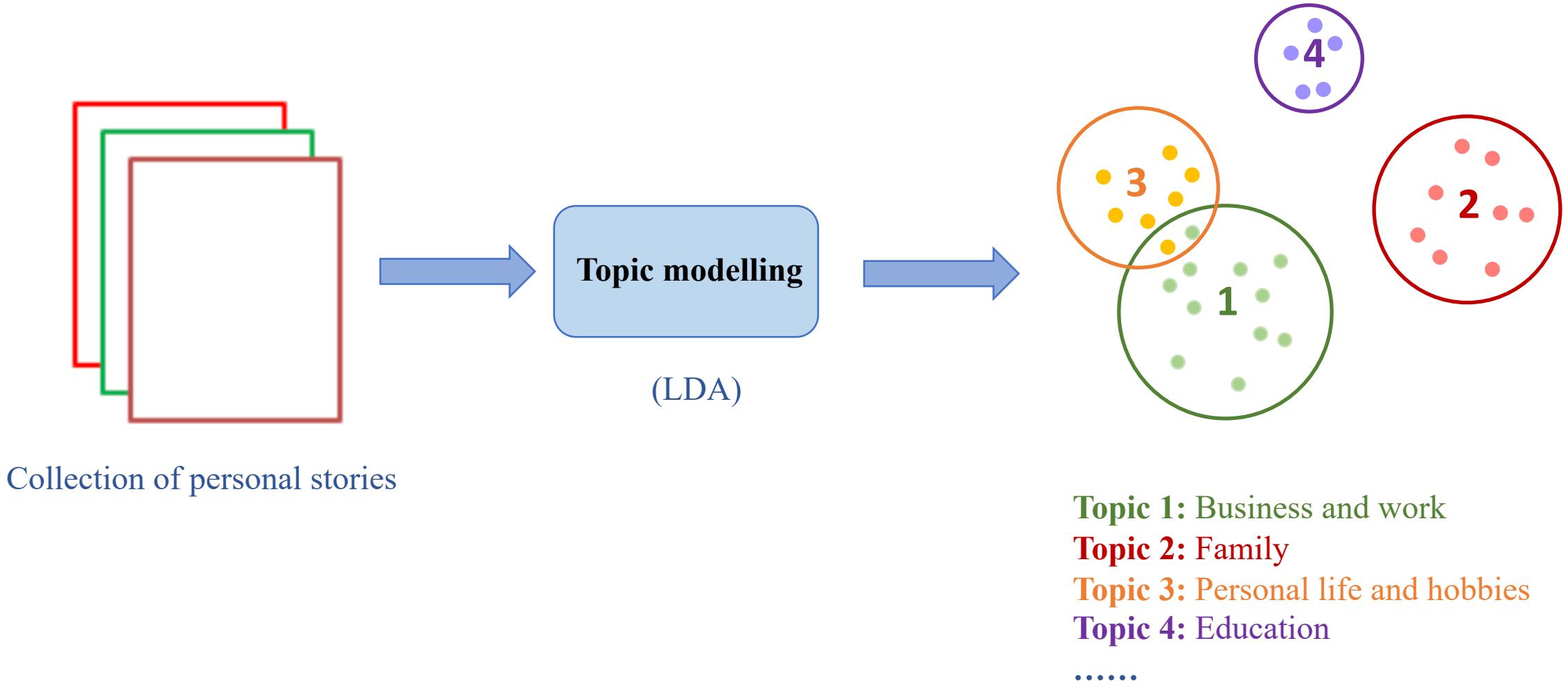
Random Forest  
classifier



AUC score: **62%**

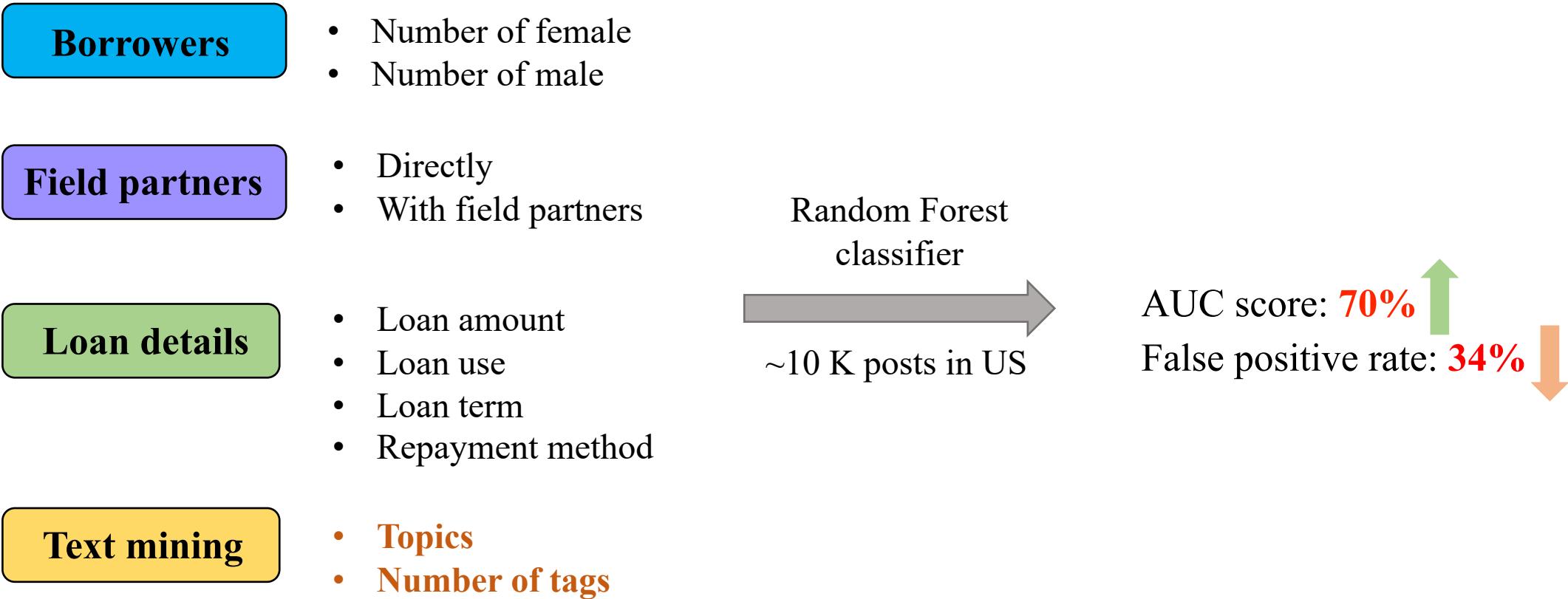
False positive rate: **37%**

# Topic modeling on personal stories



# Model and validation

- Random forest classifier with features from topic modeling

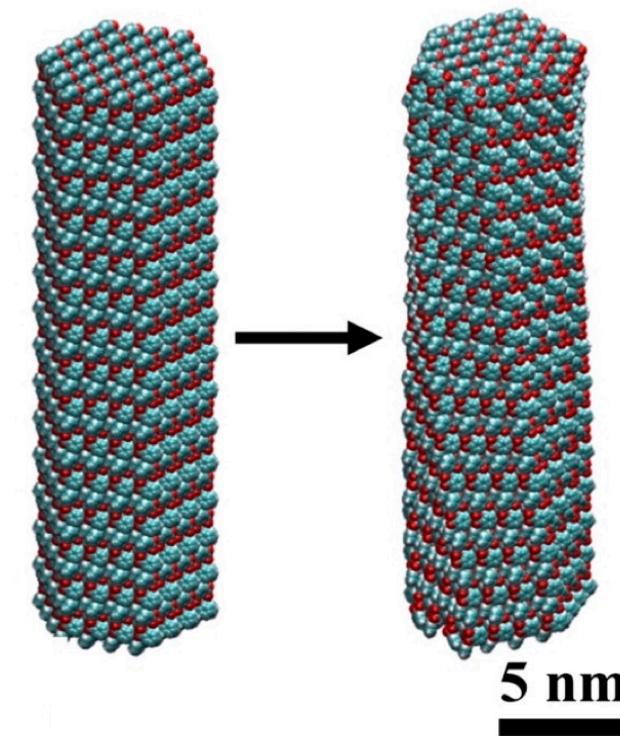
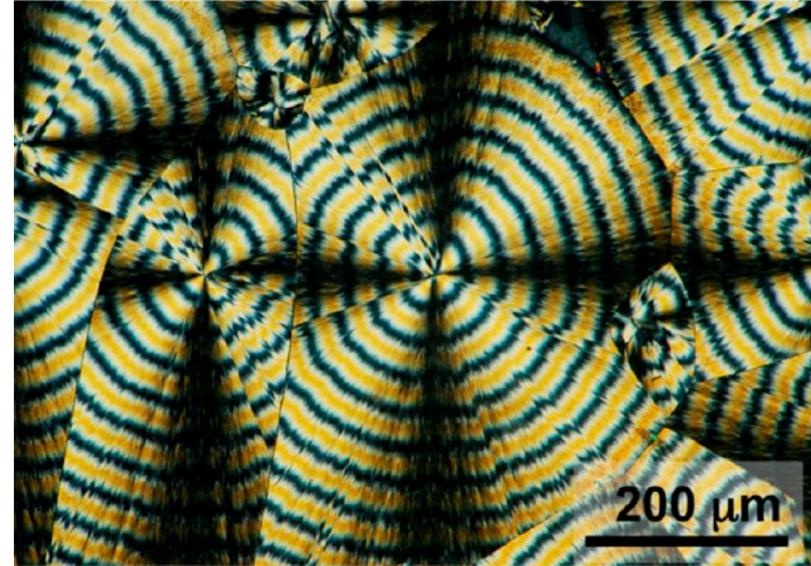


# Demo

<http://givamekiva.com/>

# About Me

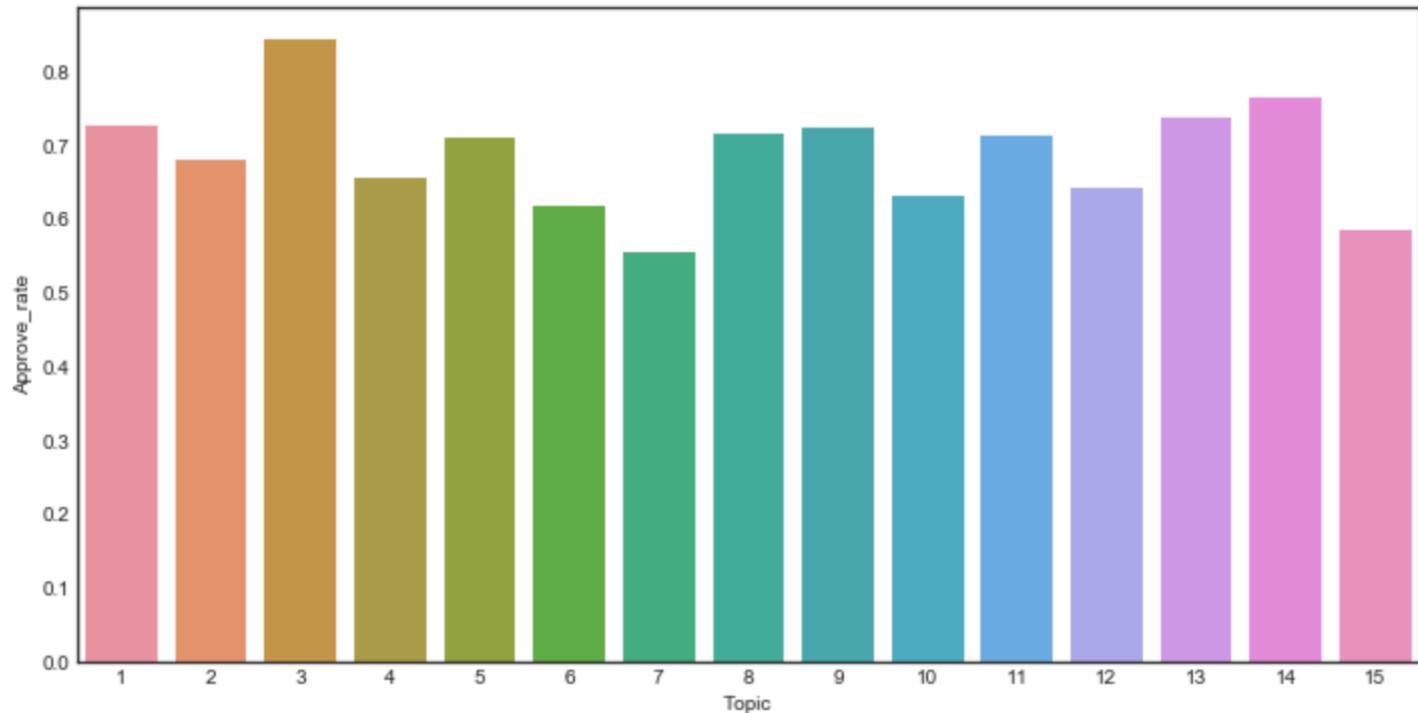
Chao Li



# Topic modeling

## Topics from personal stories

Latent Dirichlet Allocation



**Topic 1:** business, life, work, hard

**Topic 2:** people, community, world, city

**Topic 3:** loan, need, help, purchase

**Topic 4:** food, farm, kitchen, cooking

**Topic 5:** family, school, business, work

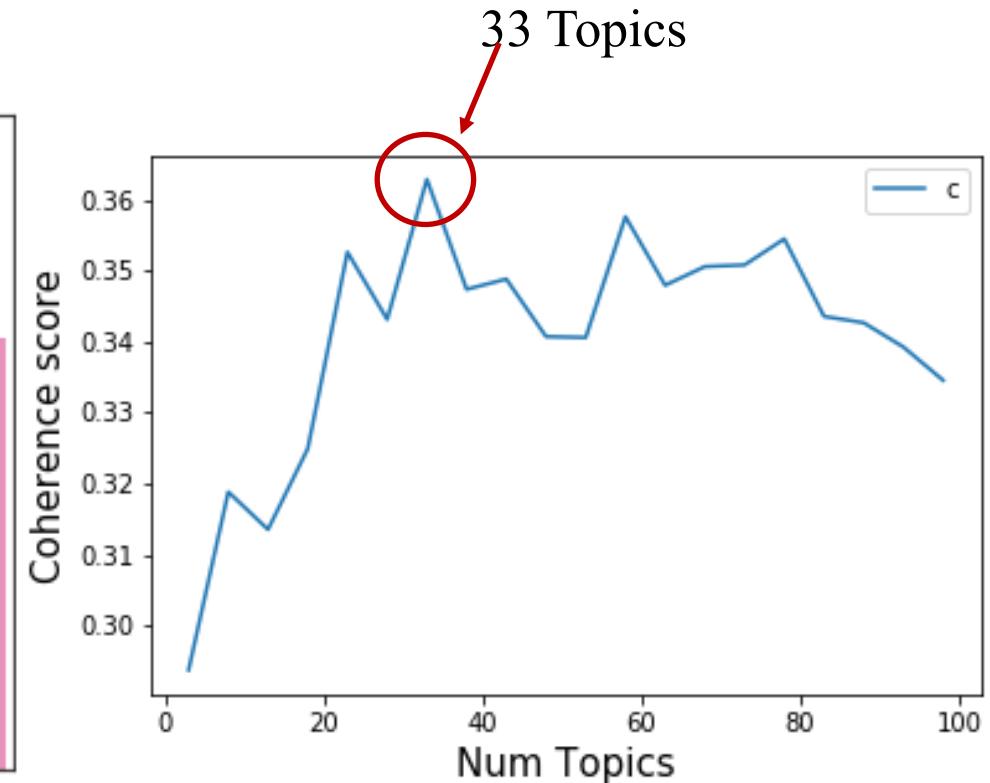
**Topic 6:** health, family, cancer, care

**Topic 7:** school, university, education, degree

**Topic 8:** support, start, new, future

**Topic 9:** company, job, work, opportunity

**Topic 10:** coffee, fashion, music, clothing



33 Topics

# Baseline model



## Features from Kiva website:

### Borrowers

- Country
- Female/Male

### Field partners

- Partner risk rate
- Total loans posted
- Total amount raised
- Default rate

### Loan details

- Loan amount
- Loan use
- Loan term
- Repayment method

Random forest  
classifier

~700 K posts

AUC score: **62%**

### Predicted

Expired      Funded

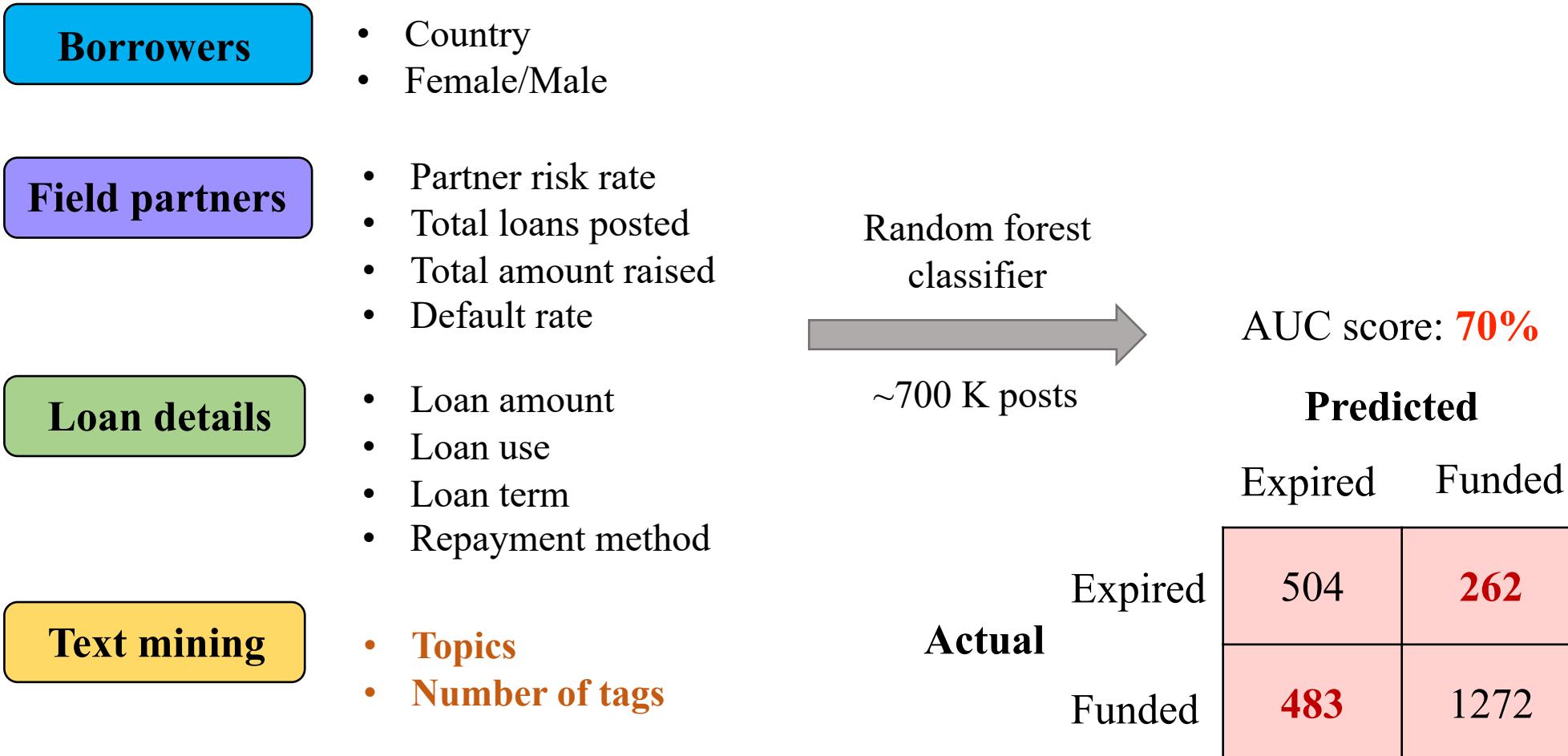
Actual  
Expired

482	<b>284</b>
<b>649</b>	1106

Funded

# Model and validation

- Random forest classifier with features from topic modeling



<b>Feature</b>	<b>Importance/%</b>
Loan amount	27.78
<b>Num_tag</b>	<b>26.56</b>
<b>Topic of personal story</b>	<b>13.38</b>
Loan use	10.18
Repayment method	8.73
Distribution model	8.17
Number of female	2.33
Number of male	2.20