Experience Optimization of Data Collection in AI

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Problem Definition

- Algorithm accuracy is one of the key elements to solve issues like trust, transparency and privacy.
- The experience of data collection to improve accuracy is not always enjoyable for users.
- How to improve end users’ willingness to provide feedback during the entire lifecycle?
Pattern Research

35 product apps/webs

90 relevant interfaces

4 UI patterns
Pattern Research

Pattern 1 - Binary Choice

Pattern 2 - Scale

Pattern 3 - Lable choices

Pattern 4 - Mix & User Input
Pattern Research

1 ON 1 INTERVIEW
How do people think of & use the ‘feedback’ function?
Pattern Research

01 UI Pattern
6/8 of the users know where are the entries for feedback

02 Incentives
All of them have had intention to give feedback but they ‘seldom’ do

03 Time
Only when they are quite annoying

04 Intention-Action Gap
Distrust, troublesome, unawareness
SCENARIO SELECTING

Broadly-used
We will select a broadly-used product and scenario which many of us are already familiar with, so they will not have bias because of the scenario or prototype itself.

Practical Needs
We will evaluate whether user feedback is a real need for all stakeholders (different end-users, clients and the platform itself).
Project Reframing

We decide to focus more on improving users’ willingness to give explicit feedback by

1. Enhance user incentives
2. Improve timing to ask for feedback
3. Explore novel UI patterns
SCENARIO SELECTING

Tick Tock Ads

The Platform

- Began advertising since 2019
- Still under experiments
- User feedback proves greater business value
SCENARIO SELECTING
Tick Tock Ads

Advertisers

16-24 years old

- The age range has increasing purchasing power

$50-120k each ad

- Considering the price, it’s crucial to target to the right audience
SCENARIO SELECTING
Tick Tock Ads

End-users

According to feedback from big social platforms such as Twitter and Reddit, among which 72% have negative experiences. they dislike some of the Tik Tok ads because:

- Not relevant to their interests
- Think it's stupid / rude
- Advocates for harmful values
- The product is fake
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

↑ Swipe
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

Specify negative thoughts
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

Metaphors
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

light the fire
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

Specify positive thoughts
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

Specify reasons
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

Explain what will happen
IDEATION

Novel UI Patterns

Improve Timing

Enhance Incentive

Reward
SURVEY

15 responses

show attitudes toward the 8 design ideas with the like-scale of 1-5
INITIAL FILTERING

Novel UI Patterns

Improve Timing

Enhance Incentive

2.53

2.26

3.53

2.86

2.2

2.4

1.66

1.93
 INITIAL FILTERING

Novel UI Patterns

Improve Timing

Enhance Incentive

2.53
2.26
3.53
2.86
2.2
2.4
1.66
1.93
INITIAL FILTERING

Novel UI Patterns

Improve Timing

Enhance Incentive

2.53 2.26 3.53 2.86 2.2 2.4 1.66 1.93
Idea Direction - Enhance incentives

Tell users what consequence their feedback will bring to
Idea Direction - Enhance incentives

Offer users real benefits like membership if they provide feedback
Idea Direction - Novel UI Pattern

Let users specify reasons why they think negatively toward this ad
Comparison Experiments
Between Subjects Study

Compare those 3 picked ideas in a between-subject study using clickable prototype to calculate feedback rate of these 3 ideas.

Recruit 15 people
5 as a group, 3 groups in total
One group for one design idea
50 trials for each idea
A serial of videos & 10 Ads

- **Group A**
- **Group B**
- **Group C**

**Idea A**

**Idea B**

**Idea C**

50 trials for each idea
DEMO
Conclusion

Idea A

6/30 Click Rate
2.67/5 Comfortable level

Idea B

15/30 Click Rate
4.33/5 Comfortable level

Idea C

3/30 Click Rate
3.67/5 Comfortable level
Conclusion

Temporary Winner

1. People have stronger willingness to give negative feedback
2. Benefit-driven thoughts have less influence on real actions compared with sense of avoiding trouble

Tell users what consequence their feedback will bring to
Future Work

Get more participants to finish comparison test

Find other possible ways to test the ideas of ‘improve timing’ direction
Reflection

1. Balance of fun design, emotion, motivation and interaction
2. Deep relationship of human feelings and technology
3. Help and support from the class