

Need Finding

Logo Recognition

Abstract

We would like to design an application which is able to recognize logos from a given photo and provide relevant information about the logo and its brand. There are various brands in the same market and each brand needs to advertise to attract more customers. The logo recognition enables many potential customers to know the brand quickly and get access to the brand. This report will focus on the pain points of brand searching and the users' need for logo recognition in their daily life.

Introduction

Problem Space

Brand searching is useful when customers have the problem of choice overload. Many customers prefer using the same products which are used or recommended by famous people and bloggers. Currently, Taobao has the function of photo recognition which helps the customers get access to the items in the picture. However, it only recommends similar items which are available in Taobao and does not provide any information or other purchase method except for Taobao. Therefore, this application of logo recognition would focus on recognizing the brand and providing relevant information about this brand. Users can know more about the brand and choose the purchase method they prefer.

User Type

Geographic: Have access to the internet	Behavioral: Able to upload picture for logo recognition
Demographic: Age: 15-60 Income: unlimited	Psychographic: Love to spend time on brand searching Prefer recommendation from other users

Need Finding Plan 1: Observation

Concentrate on collecting data including but not limited to:

1. What is a user's major motivation when they need to recognize a logo?
2. What is the existing approach to recognize logos?
3. What is the cost (money/time) of the approaches?
4. When a user is unable to recognize a logo, do they have a backup plan? If so, how often will they be satisfied by the backup plans.

Need Finding Plan 2: Interviews

User selection

1. Age range: 20-70
2. Education: High school and above
3. Avoid only interviewing the same type of people.

Initial script:

1. Greeting and brief intro to the interview
2. Get to know the user: background and occupation, etc
3. In what situation will you want to find out a logo's name.(Three example)
4. How often do you need to search for the meaning of a logo?
5. What approach do you use to search for the meaning of a logo.
6. How much time or money does it usually take to search for a logo.
7. If you are unable to recognize a logo, will you just ignore it or you will do something else to bypass the logo recognition. If there is an app that can recognize a logo, will you keep the app or feel that it is not helpful. Do you think an app that can recognize logos is necessary?
8. What kind of logos do you want to know from a picture?

Need Finding Execution 1: Observation

Need Finding Execution 2: Interviews

We have interviewed the users who love to do brand searching and usually purchase the items which are popular and recommended by the famous people.

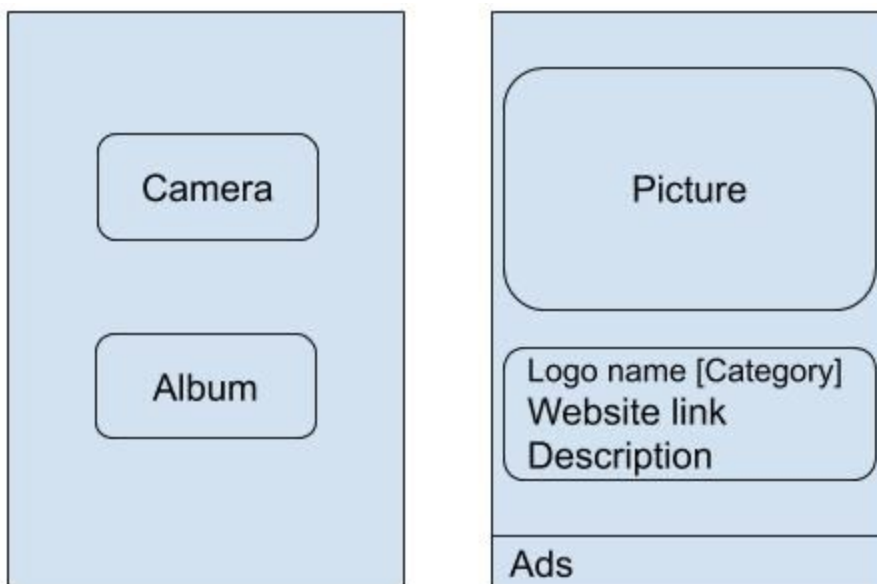
Situation of Using Logo Recognition

Users would like to use logo recognition when they are viewing an attractive photo and they want to know more about the items in this photo. For example, if a user is viewing a K-POP star's picture and the user will like to know how to purchase the same clothes or jewelry of this K-POP star's. Also, when a user is watching someone else's Instagram story, the user is interested in the clothes that are appearing in this Ins story, and he/she will want to use the brand searching for these clothes.

Information from the Logo Recognition

Users want to know not only the brand from the picture, but also the price, official purchase link of this brand. If it is possible, they want to view other pictures with this brand. Users want to have brand comparison by recommending similar brands and help them to compare different brands.

Prototype



Some textual explanations are given as follows:

1. There are two panels. In the first panel, there are two icons. One is "From camera", one is "From album." The first panel is used to input the data(picture)
2. The second panel is used to show the results, including name of the logo, category, website link.
3. In the backend, we first transform the picture to a vector. Then use a classification model to find the corresponding logo name and its related information.

Evaluation Plan

Content of Evaluation

We will evaluate the prototype based on the following contents:

1. Is this prototype easy to use?
2. Can the prototype satisfy all the users requirements?

Evaluation Method

We use interviews to see whether a user is satisfied with our prototype. The script of the interview is shown as follows:

1. Greeting and brief intro to the prototype.
2. Ask them whether the process is difficult or redundant to them.
3. Ask them what features they think should also be added.
4. Get to know the user: background and occupation, etc

Summary

Conclusion and Next Step

1. Collect photos of logos and design the datasets
2. Start from recognizing one category of logos
3. Improve the accuracy of the first try

Alternative Result

Logo Recognition

1. Model that can recognize logo to a name
2. Show what category of the logo (cloth, car, food, etc)
3. Show other logos that are relevant (similar). (content-based recommendation)
4. If the product can't recognize the logo, then suggest a closest one or a list
5. Except picture recognition, other forms of input could be supported.

Appendix

Relevant Information

Searching index of different brands (some shows the needs and daily visiting number)

(e.g. <https://index.baidu.com/v2/main/index.html#/trend/chanel?words=chanel>
<https://trends.google.com/trends/?geo=US>
<https://www.zhihu.com/question/37868245>)

User Profile