

## OUTFIT IN LIVE

### A. Problem Background

My website is called “OUTFIT IN LIVE” and “Live” refers to music festivals. Going to music festivals has gradually become a new trend for young people to socialize and entertain in recent years in China. As a person who really enjoys live music and have experienced various live shows in concerts, LiveHouses and music festivals, I find it difficult to arrange appropriate outfit for these occasions, especially for music festivals which are generally held outdoor.

#### *Interviews*

In fact, I am not the only one who has this problem. Among my 5 interviewees, 3 interviewees mentioned that they will spend a lot of time arranging outfit in advance before going to music festivals and they all use the lifestyle app RED (小紅書) to get some references. During the interviews, one of the interviewees said that “different types of music festivals, actually have their own characteristics to convey, but this kind of culture-related information is very difficult to have a systematic presentation on RED”, and “fans would like to have something showing that they are fans of the performers, but I cannot get such culture-related outfit things on RED” (See in Appendix-1). While another interviewee said that “arranging outfit for a music festival is complicated because you want to be cool or sexy, but not freezing yourself” and “if I go to a rock festival, I may wear vintage style; if I go to a hip-hop festival, I will wear as fashionable as possible; if I go to an outdoor festival, I will wear more photogenic clothes” (See in Figure 1). In China, young people mainly use the lifestyle app RED(小紅書) to arrange outfit. However, if they search “music festival outfit” on RED, the content they will see is homogeneous and not targeted, meaning it can neither take local weather and the cultural

characteristics of specific music festivals into consideration nor show a person's own personality or preference, simply dividing the outfit into styles of "cool (酷)", "hot (辣)", "valiant (飒)", etc. Consequently, it is common for newbies who lack experience to wear inappropriate clothes in music festivals that lead to injury, cold, sunburn and embarrassment.



Figure 1. Screenshots for Interview

### Persona Types

After conducting interviews, 5 persona types are found as follows:

*P1: Fan of a specific performer to watch his/her preferred artist's show.*

*P2: Live music lover who enjoys attending various live shows.*

*P3: Office worker who looks for some fun on his/her day off.*

*P4: Student who is not a fan of anyone but wants to experience a music festival.*

Among them, the persona type of P1 is chosen. Firstly, this persona type appears most frequently among interviewees, so it is representative to a certain extent. Secondly, data shows that the proportion of fan groups in music festival audience is enlarging. In the past, music festival is a kind of minority culture for rock music lovers, but nowadays it is incorporating

more music genres, hence there is an increasing need for fans of pop singers, hip-hop musicians, and idols to come to music festivals. Finally, since most of them are festival newbies, not familiar with the whole thing, they strongly need various help during their journey. The detailed information of P1 is shown in Figure 2. Gender is “Female” because most of the fans are female who pay more attention to the outfit problem in a music festival. No surprisingly, as a young woman, P1 is highly dependent on social media and wants to present a good image, so she has an urgent need to post photos of herself in nice clothes. Also, she is considerate, so she usually gathers a lot of information in advance to arrange appropriate outfit in a music festival.

	<ul style="list-style-type: none"> <li>• Sex: Female</li> <li>• Age: 22</li> <li>• Education background: Postgraduate</li> <li>• Hobbies: Listen to hip-hop music, dance and watch movies</li> <li>• Media usage habit: Heavy reliance on social media (WeChat, Weibo, Red Book &amp; Tik Tok)</li> <li>• Personality: Outgoing and considerate</li> </ul>
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Figure 2. Persona 1

### *Journey Map*

The Journey Map of P1 is depicted in Figure 3. In the Journey Map, the whole journey is divided into 3 phases: Before Festival, During Festival and After Festival. There are two types of scenes: At Home and At Venue. Before and After Festival, the user is at Home; During Festival, the user is at Venue. The things that user does before festival are firstly getting news about music festival, secondly booking tickets, thirdly making preparations including arranging the makeup and outfit, buying clothes on shopping apps and checking local weather. During festival, the user watches show, takes photos, has food and drinks, etc. After festival, the user posts photos and make comments on WeChat Moments or Weibo.

Persona: Student Fan of a specific performer to watch his/her preferred musician's show					
Phase of Journey	Before Festival			During Festival	After Festival
	Get News	Book Tickets	Make Preparations		
HOME	<ul style="list-style-type: none"> <li>Search related information on Weibo, WeChat Account and ticketing apps to decide whether to go to the music festival</li> </ul>	<ul style="list-style-type: none"> <li>Book tickets on ticketing apps including DaMai and XiuDong</li> <li>Access to official or privately formed music festival-related WeChat groups</li> </ul>	<ul style="list-style-type: none"> <li>Arrange travel plans on navigation apps</li> <li>Arrange accommodations on travelling apps</li> <li>Get familiar with songs of other performers on music apps</li> <li>Arrange the makeup and appropriate dressing referring to Red Book</li> <li>Buy clothes on online shopping apps</li> <li>Check local weather and prepare rain gear or sun protection</li> <li>Search online to know about do's and don'ts</li> </ul>	<ul style="list-style-type: none"> <li>Post photos and make comments on WeChat Moments or Weibo</li> <li>Share feeling with friends through WeChat</li> </ul>	
VENUE				<ul style="list-style-type: none"> <li>Store luggage</li> <li>Check performance schedule to know the time and stage of the preferred musician's show</li> <li>Take photos</li> <li>Attend signing session</li> <li>Buy official branded products and the musician's albums</li> <li>Have food and drinks served on site</li> </ul>	
FEELING	😊	🤔	😱	💡 😊	😊

Figure 3. Journey Map of P1

### Problem Statement

Through above research and analysis, the problem is stated as below:

How might we help fans of specific performers who come to music festivals mainly to watch their beloved artists' live show to arrange ideal outfit, so that they can pursue individuality and self-expression while showing support for their beloved artists in music festivals under the premise of health and safety? Therefore, I want to create a website based on music festivals in China, which can recommend outfit according to local weather and the music/outfit styles of performers in a specific music festival.

## B. Requirements

### Story Map with Information Source/Shortcoming/Strategy

My website limits the scope to focus on “Before Festival” phase and “After Festival Phase”, so in the story map (See Figure 4) there are 8 user tasks: search information about festivals, book tickets, check local weather, figure out artist's music style, figure out artist's

outfit style, search dressing tips, buy clothes on Taobao and take photos. The relevant functional requirement, informational requirement, and the sources/shortcomings/strategies of information are also summarized in Figure 4.

User Task	Functional Requirement	Information Requirement	Source / Shortcoming / Strategy
<ul style="list-style-type: none"> <li>Search information about festivals</li> <li>Book tickets</li> </ul>	<ul style="list-style-type: none"> <li>Enable to search and filter music festivals by name, date, city, artists</li> <li>Visualization: a map view showing all cities where a festival will be held</li> <li>allow jump to ticket booking websites</li> </ul>	<b>Music Festival Information:</b> <ul style="list-style-type: none"> <li>name, date, city, location, venue, official posters, lineup, ticketing link</li> </ul>	<ul style="list-style-type: none"> <li><b>Source:</b> Damai: <a href="https://www.damai.cn/">https://www.damai.cn/</a>; Showstart: <a href="https://www.showstart.com/">https://www.showstart.com/</a></li> <li><b>Shortcoming:</b> missing and inconsistent</li> <li><b>Strategy:</b> Scrape all music festival information from Damai and ShowStart, then verify the information of the organizer's WeChat Public Account one by one</li> </ul>
Check local weather	<ul style="list-style-type: none"> <li>Show information about local weather</li> <li>Show dressing index</li> </ul>	<b>Local Weather Information:</b> <ul style="list-style-type: none"> <li>weather forecast</li> <li>historical weather data</li> <li>dressing index</li> </ul>	<ul style="list-style-type: none"> <li><b>Source:</b> 中國天氣網-historical weather : <a href="http://www.weather.com.cn/forecast/history.shtml?areaid=101010100&amp;month=6">http://www.weather.com.cn/forecast/history.shtml?areaid=101010100&amp;month=6</a></li> <li><b>Source:</b> 2345-15 day weather forecast: <a href="https://tianqi.2345.com/">https://tianqi.2345.com/</a></li> <li><b>Strategy:</b> Combine the historical and forecast data to offer dressing index</li> </ul>
Figure out artist's music style	show information about each artist's music and allow music play	<b>Artist's Music Style:</b> <ul style="list-style-type: none"> <li>music genre</li> <li>artist's profile</li> <li>3 representative songs</li> <li>keywords of music style</li> </ul>	<ul style="list-style-type: none"> <li><b>Source:</b> QQ Music: <a href="https://y.qq.com/?ADTAG=myqq#type=index">https://y.qq.com/?ADTAG=myqq#type=index</a></li> <li><b>Source:</b> NetEase Music: <a href="https://music.163.com/#">https://music.163.com/#</a></li> <li><b>Source:</b> Xiami Music genre document : <a href="https://xiami-music-genre.readthedocs.io/zh_CN/latest/index.html">https://xiami-music-genre.readthedocs.io/zh_CN/latest/index.html</a></li> <li><b>Strategy:</b> Firstly, scrape all the answers under Zhihu's (知乎) questions "How to evaluate the artist xxx? (如何評價xxx ?)" and related articles on WeChat Public Account, then conduct word frequency statistics on the data obtained to determine several keywords about the artist's music style. For example, the keywords for New Pants (新裤子) is "復古, 迪斯科, 國潮, 跳舞". Secondly, see if anyone on the internet has already done similar summaries. If the two methods above do not work, summarize myself.</li> </ul>
<ul style="list-style-type: none"> <li>Figure out artist's outfit style</li> <li>Search dressing tips</li> <li>Buy clothes on Taobao</li> <li>Take photos</li> </ul>	<ul style="list-style-type: none"> <li>Show information about each artist's outfit style (if any)</li> <li>Show dressing tips by importance</li> <li>Show recommendation according to both local weather and artist's style</li> <li>Show photo taking tips</li> </ul>	<b>Artist's Outfit Style (if any) :</b> <ul style="list-style-type: none"> <li>pictures of artist's representative outfit</li> <li>keyword description</li> </ul> <b>Dressing Tips</b>  <b>Recommendation</b> <ul style="list-style-type: none"> <li>the same/similar outfit as the artist with brand name and price</li> <li>the artist's own clothing brand with price (if any)</li> <li>the same style of outfit as the artist with brand name and price</li> </ul> <b>Photo Taking Tips</b>	<ul style="list-style-type: none"> <li><b>Strategy:</b> Download photos in Artist's Official Weibo/Instagram</li> <li><b>Strategy:</b> Summarize on my own</li> <li><b>Strategy:</b> Collect information online</li> <li><b>Strategy:</b> Use Pailitao (拍立淘) to find the same/similar cloth product information</li> <li><b>Strategy:</b> Search online to see whether the artist has an own brand</li> <li><b>Strategy:</b> The search keywords are a combination of Artist's Music/Outfit Style and dressing index. For example, the search keywords for New Pants (新裤子) fans if they will attend the music festival in JinZhong (晋中) are "復古/國潮/迪斯科 + 風衣/大衣/夾大衣/外套/毛衣/毛套裝/西裝/防寒服". Then search on online shopping sites by the above keywords, pick some of the results on my own.</li> <li><b>Strategy:</b> Collect information online</li> </ul>

Figure 4. Story Map with Information Source/Shortcoming/Strategy

## Information Structure

After conducting 3 open card sorts, the information structure is designed as below:

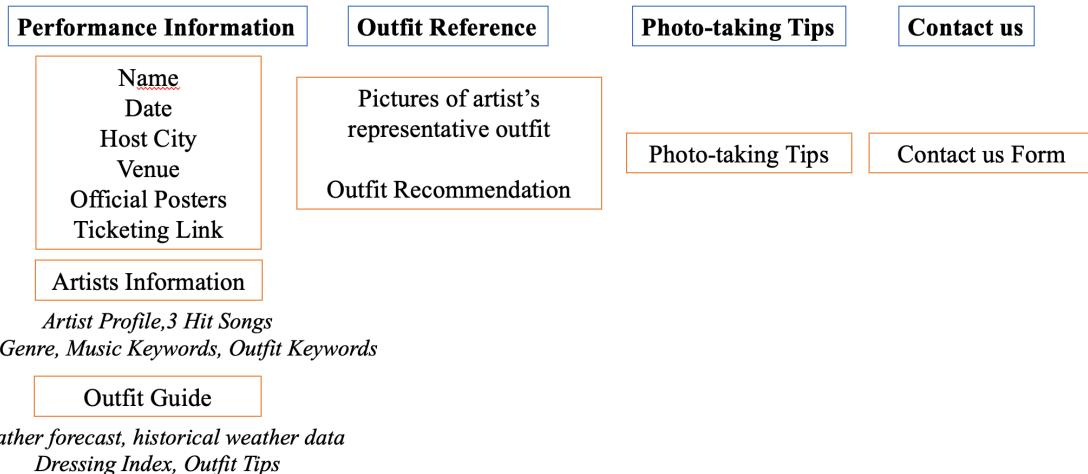


Figure 5. Information Structure of the website

## Position Map

This prototype aims at combining functions of Ticketing Websites, Red Book and Weather Websites, so that users can not only get comprehensive information of music festivals but can also know about the weather information and get outfit references for music festivals (See in Figure 6). Compared to Ticketing Websites, the prototype provides the artist's personal music style and allow users directly listening to hit songs. Compared to Red Book of which content is mainly generated by users, the outfit references for a specific music festival offered by this prototype are more targeted, not only taking local weather and culture-related information into consideration, but also showing dressing index and dressing tips for users.

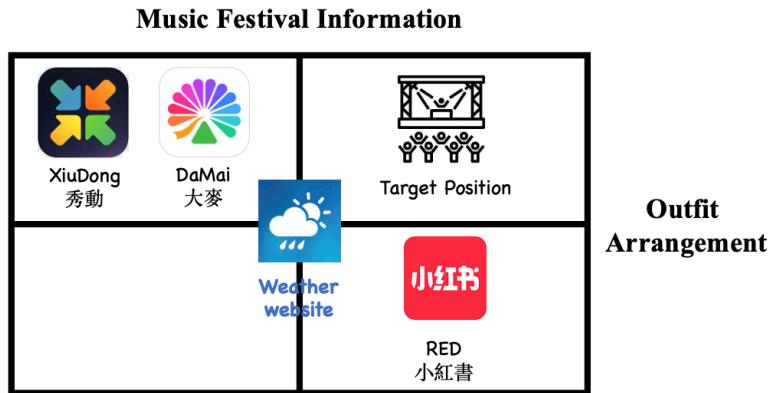


Figure 6. Position Map

## C. Design

### *Prototype Design: Wireframe Version*

Figma Link: <https://www.figma.com/file/GFMAOglURABOwuPTBzPkK3/DRESSING-IN-LIVE?node-id=0%3A1>

Following the functional and information requirement, as well as the information structure, the wireframe version prototype is designed (See Figure 7 & 8). As is shown in Figure 6, every music festival will have its own page which aims at offering more specific information, including artists information and outfit guide. In the “musician” section, users can find the music genre, music keywords and outfit keywords, and they can also listen to musicians’ hit songs. The reason why I offer this information is that I intend to give users a general idea of the overall style of the music festival and each musician’s own style so that they can come up with some ideas about their own outfit. In the “outfit guide” section, users can find local weather information, dressing index and outfit tips. The dressing index is offered based on the historical and forecast weather data. These contents are mainly for users’ health and safety.

The figure displays two main pages from the 'DRESSING IN LIVE' website:

- Index Page:** Features a large banner with the text "DRESSING IN LIVE" and "JUST DRESS IT!". It includes a search bar and navigation links for "首页", "演出信息", "穿搭参考", "拍照TIPS", and "联系我们". Below the banner is a section titled "写在前面：听什么歌=穿什么衫？ Preface: Music you create = Style you wear?" followed by placeholder text.
- Performance Information (General) Page:** Shows a list of performances. One entry for "舟山|舟山东海音乐节" is highlighted with a blue arrow. This entry includes details like date (2021.11.27), location (舟山市朱家尖南沙景区沙滩), price (280-399元), and a "前往购票" button. Another entry for "盐城|江苏省东台市黄海森林公园" is also shown.
- Performance Information (Specific) Page:** Provides detailed information for the "舟山|舟山东海音乐节" performance. It includes a weather forecast (10-15°C, 8-10°C), a "想去" button, and sections for "预测穿衣指数" (with icons for cool, warm, etc.), "穿搭TIPS" (with bullet points about music style and wind protection), and "参演音乐人" (with a circular icon).
- Musician Outfit Reference Pages:** Two examples are shown for musicians 莫寒羊 and 钢心. Each page features a circular icon, a "音乐流派" section (e.g., #Pop Rap #Trap Rap), a "音乐关键词" section (e.g., #古怪 #童真 #浪漫), and a "热门作品" section (e.g., 未来来电, 健康快乐, 鱼, 甜醉仔, 返乡列车). The 莫寒羊 page also includes a bio and a photo.

Figure 7. Pages of Index and Performance Information (General & Specific)

If users want to try a musician's style, they can click the musician in Performance Information (Specific) Page or go to Outfit Reference Page (General). Every musician has his/her own Outfit Reference Page (Specific) (See in Figure 8), and these pages are only for registered members. In these pages, users can find information about musician's personal outfit and recommendations based on their music/outfit keywords. Combining with the dressing index offered in previous page, users can find the clothes suitable for a specific festival through filtering. And the “purchase” button will redirect users to online stores.

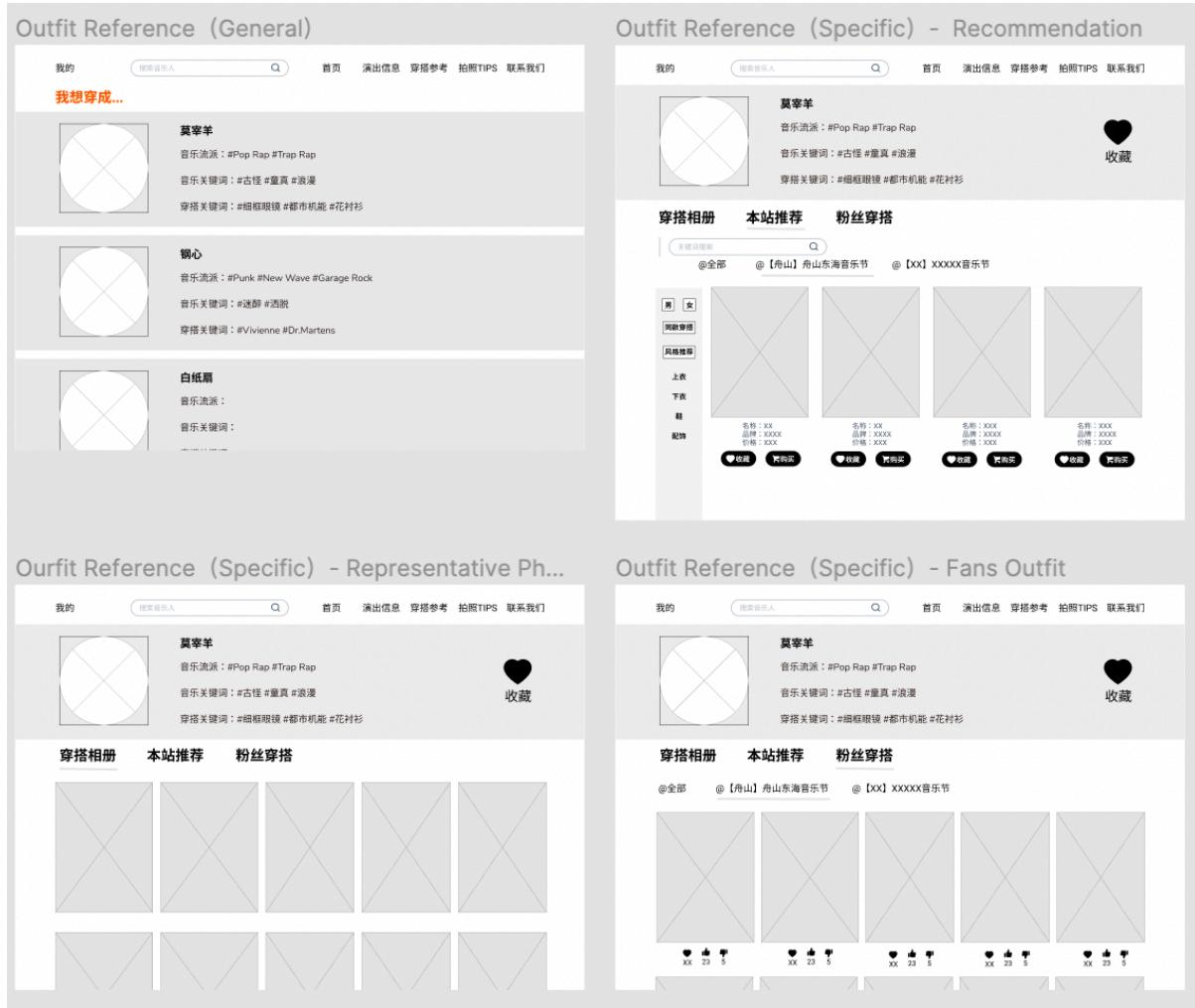


Figure 8. Pages of Outfit Reference (General & Specific)

### **Prototype Design: Flask App Version**

Pythonanywhere Link: <http://haruhiko.pythonanywhere.com/>

After conducting a usability test on the wireframe version prototype, several adjustments based on the test results (See in Appendix-2) were made to improve the usability. Firstly, since 4 of 5 participants did a wrong click that they clicked on “穿搭相册” and thought it would show the same clothes as the artist’s, the flask app version prototype put the artist’s same clothes into “穿搭相册” instead of putting them into “本站推荐”, meaning that the “查看详情” button below the photo will redirect users to the product information of the artist’s same cloth that they are interested about (See in Figure 9).



Figure 9. Outfit Reference Page (Xinkuzi)-

Secondly, since the name “穿搭相册” and “本站推荐” confused participants, the flask app version prototype has changed to “艺人同款” and “穿搭推荐” (See in Figure 10).



Figure 10. Outfit Reference Page (Xinkuzi)

Thirdly, since participants didn't think it is necessary to have a single page for photo-taking tips, it has been removed in the latest version. In addition, instead of putting musician information and outfit guide into same view, the flask app version prototype has split them into

two tabs “参演艺人” and “穿搭指南” to differentiate the content (See in Figure 11).

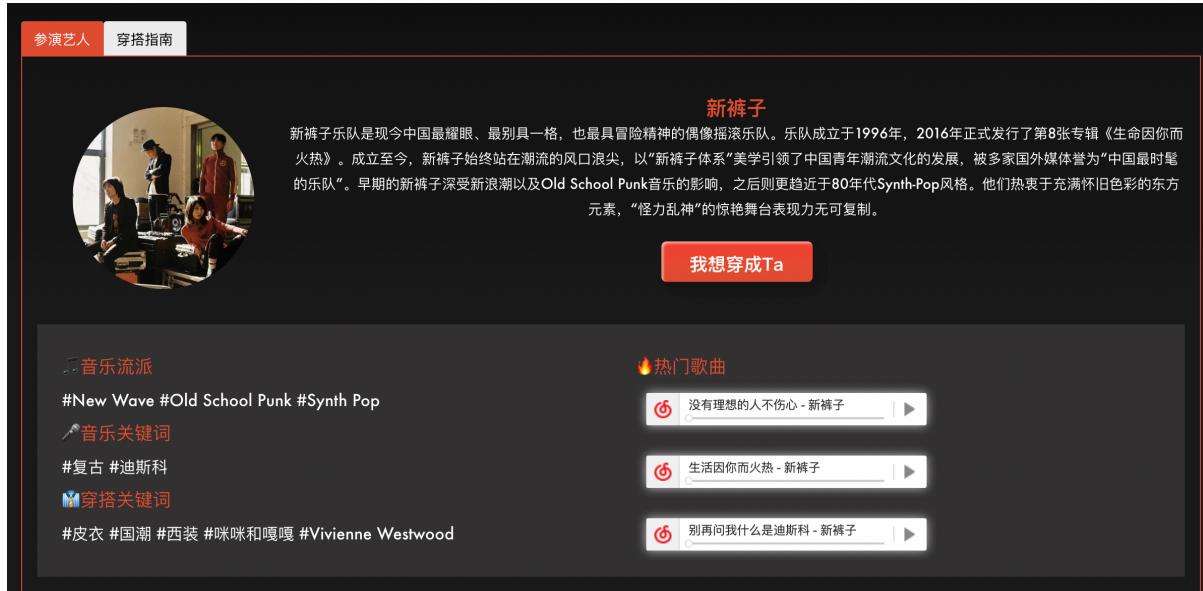


Figure 11. Performance Information (Donghai Music Festival)

Meanwhile, several features have been added to improve user experience. Firstly, a button named “我想穿成 Ta” is added below artist's profile so if users are interested about a musician's style, they can directly go to the musician's Outfit Reference Page by clicking this button (See in Figure 11). Secondly, when unauthenticated users click artists' name in Outfit Reference Page (General), the website will jump to Login Page which directs users to the Register Page. An Encourage Registration Banner (See in Figure 12) is added in Index Page and Registration Page to encourage users to sign up for membership by explaining that members can view Outfit Reference Pages of all artists. Also, the button named “戳这里查看示例页面” in the banner allows user to view an example page for so that they can have a general idea of what the page looks like and then decide whether to become a member.



Figure 12. Encourage Registration Banner

Moreover, a visualization map which shows all cities where a music festival will be held in recent days is added in Performance Information (General) Page (See in Figure 13). Actually, ticketing websites tend to offer user location-based services which directly show the results in user's city, but in terms of music festivals, offering overall results is better because nowadays it is common for people to have a music festival trip, travelling to other cities.



Figure 13. Visualization Map

Lastly, to help users better understand the intention of the website, a preface is added in Index Page (See in Figure 14). In summary, the website tries to make a connection between outfit style and music style, that is, the music you like can predict the style you wear and vice versa. And through this connection, it provides solutions for music festival outfit which enable

users to dress like their beloved musicians so that they can pursue individuality while showing support, and even find someone who shares their outfit/music tastes.



Figure 14. Preface in Index Page

## D. Test/Evaluation

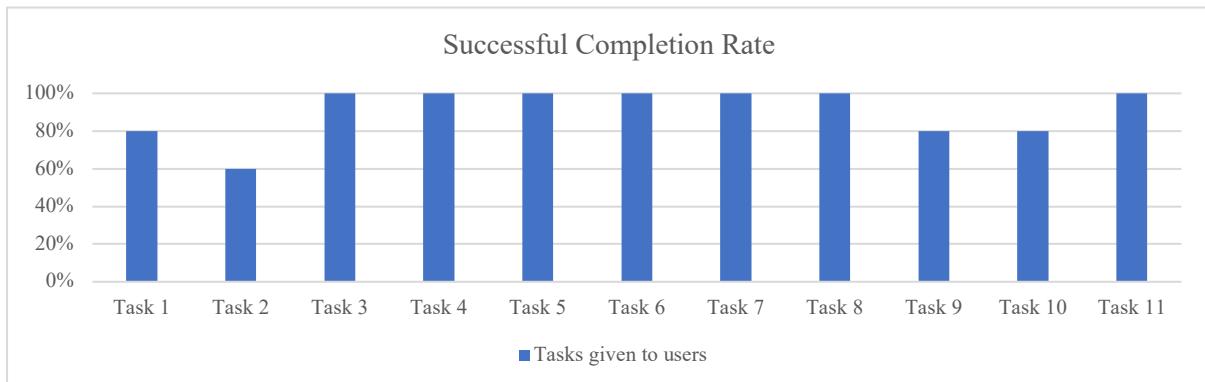
### Usability Test Results

#### 1) Test Task

- |   |   |
|---|---|
| 1.Register  | 7.Figure out an artist's music style  |
| 2.Log in  | 8.Figure out an artist's outfit style   |
| 3.Find the music festival that you want to go         | 9.Find the same clothes as the artist's   |
| 4.Find local weather information of the festival      | 10.Find the clothes which is recommended based on the artist's music/outfit style |
| 5.Find the appropriate clothing type for the festival | 11.Find your profile  |
| 6.Figure out the performers in the festival           |   |

#### 2) Effectiveness

##### 2.1 Completion Rate



## 2.2 Errors Summary

Task	Error Rate	Error Type	Description	Counts
Task 1	0.2	Wrong Input	Username less than 4 characters	1
Task 2	0.4	Wrong Input	Input Email instead of username	2
Task 4	0.8	Unnecessary Slip Unintended Click	Scroll upwards Click on Festival Name	3 1
Task 9	0.2	Wrong Click	Click wrong target	1
Task 10	0.2	Wrong Click	Click wrong target	1

## 3) Efficiency

Task Time Per Task Per Participant (Unit: seconds)

Task: 1-11      Participant: A-E

	1	2	3	4	5	6	7	8	9	10	11
A	20	11	7	16	2	1	1	1	10	2	5
B	25	13	8	35	1	1	2	1	23	1	2
C	18	20	7	12	2	1	1	1	29	1	2
D	21	×	9	43	2	1	1	1	×	×	1
E	×	×	6	14	1	1	1	1	12	1	2
Efficiency	0.038	0.043	0.14	0.054	0.7	1	0.9	1	0.052	0.7	0.54

## 4) Satisfaction

### 4.1 Task Level Satisfaction – Single Ease Question

Very Difficult (score:1) → Very Easy (score:7)

Task	1	2	3	4	5	6	7	8	9	10	11
Difficulty	5.6	5.2	6	6	6.6	6.4	6.2	6.6	6.2	6	6.2

### 4.2 Test Level Satisfaction - SUS

Questions	Strongly Disagree	Disagree	Normal	Agree	Strongly Agree
I think that I would like to use this system frequently.	0(0%)	0(0%)	1(20%)	4(80%)	0(0%)
I found the system unnecessarily complex.	2(40%)	1(20%)	2(40%)	0(0%)	0(0%)
I thought the system was easy to use.	0(0%)	0(0%)	0(0%)	2(40%)	3(60%)
I think that I would need the support of a technical person to be able to use this system.	4(80%)	1(20%)	0(0%)	0(0%)	0(0%)
I found the various functions in this system were well integrated.	0(0%)	0(0%)	0(0%)	3(60%)	2(40%)
I thought there was too much inconsistency in this system.	2(40%)	2(40%)	1(20%)	0(0%)	0(0%)

I would imagine that most people would learn to use this system very quickly.	0(0%)	0(0%)	0(0%)	3(60%)	2(40%)
I found the system very cumbersome to use.	3(60%)	2(40%)	0(0%)	0(0%)	0(0%)
I felt very confident using the system.	0(0%)	0(0%)	1(20%)	1(20%)	3(60%)
I needed to learn a lot of things before I could get going with this system.	2(40%)	2(40%)	1(20%)	0(0%)	0(0%)
SUS Score	83.5				

## 5) Conclusions

From the results, we can see that the main problems arise in Tasks 1, 2, 4, 9 and 10. For Task 1 (Register) and Task 2 (Login), the reason why participants failed to accomplish the tasks was that the prompts for information entry were not obvious and when they did not enter the information as requested, the website did not indicate the reason for the failed entry, so they didn't know what should do next. It is necessary to improve the register and login interface to reduce user input errors and better handle errors as well.

For Task 4 (Find local weather information of the festival), although all participants finished the task, 2 of them spent longer time. This was because they didn't expect that weather information would be in “穿搭指南” tab. They scrolled upwards and clicked elsewhere to find it and after several trials and errors, they finally found it. The best way to improve this point is to put “穿搭指南” tab before “参演艺人” tab so that when users enter the page, they will firstly see “穿搭指南” tab containing weather information, dressing index and dressing tips. If they want to check the performers, they will click the “参演艺人” tab to see detailed information.

For Task 9 (Find the same clothes as the artist's) and Task 10 (Find the clothes which is recommended based on the artist's outfit/music style), one participant failed to finish the two tasks because when she clicked on the border in Outfit Reference (General) Page, since no page jump occurred, she thought there was no more pages, giving up on continuing the operation.

In fact, the page jump will occur when the artist's name is clicked. Therefore, to solve this point, anywhere in the area should jump when clicked, instead of only the name (See in Figure 15).



Figure 15. Outfit Reference (General) Page

In general, the participants consider it easy to finish tasks in this website and they are satisfied with it, so the usability level of this website is relatively high. Moreover, I also got some other feedback from participants. Firstly, the classification of clothes in filtering box can be made more detailed so that users can more easily find the clothes they are looking for. Secondly, the visualization map in Performance Information (General) Page is a little bit big so when users swipe down the page, the map will be touched by mistake to zoom in and out. It can be improved by reducing the map size. Lastly, although the plug-in of “网易云音乐” allows users to listen to the hit songs of an artist, the playback will be paused after a page jump. To keep the music playing, another way to play music online is needed.

### **A/B Test Results**

In terms of the A/B Test, the change is made in Register Page. For original version (See in Figure 16), the Encourage Registration Banner is below the register form, so users need to scroll down the page to see this banner while in variant version (See in Figure 17), the Encourage Registration Banner is put on the top of the page, so when users enter Register Page,

they will directly see this banner.



Figure 16. Original Version in A/B Test



Figure 17. Variant Version in A/B Test

According to the test results, of the 57 Experiment Sessions, 41 Sessions occur in Original Version while 15 Sessions occur in Variant Version. The Variant Version has more Experiment Pageviews divided by Experiment Sessions (See in Figure 18). Also, we can see that Variant

Version has much more clicks on “戳这里查看示例页面” in Register Page, i.e., the event “Click Example Page in Register Page”, indicating that when the banner is put on the top of the page, more traffic will be brought to Example Page (See in Figure 19).



Figure 18. Pageviews



Figure 19. Event: Click Example Page in Register Page

Then, will the view of example page result in more registrations? As is shown in Figure 20, the Unique Events of “Register”, i.e., go to Register Page, is 21 (of 41) in Original Version and 14 (of 15) in Variant Version. While for the Unique Events of “Click Register Submit”, i.e., click the submit button of registration form is 17 (of 41) in Original Version and 13 (of 15) in Variant Version. Therefore, the view of example page can result in higher registration rate, with 41.5% in Original Version and 86.87% in Variant Version. We can conclude that it is better to adopt Variant Version in the future.

事件操作	事件总数	唯一身份事件数	事件价值	平均价值
OUTFIT IN LIVE A/B Test - 变体 1	175 占总数的百分比: 21.88% (800)	35 占总数的百分比: 10.80% (324)	0 占总数的百分比: 0.00% (0)	0.00 平均浏览次数: 0.00 (0.00%)
OUTFIT IN LIVE A/B Test - 原始版本	218 占总数的百分比: 27.25% (800)	48 占总数的百分比: 14.81% (324)	0 占总数的百分比: 0.00% (0)	0.00 平均浏览次数: 0.00 (0.00%)
1. Register				
OUTFIT IN LIVE A/B Test - 变体 1	140 (80.00%)	14 (40.00%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 原始版本	173 (79.36%)	21 (43.75%)	0 (0.00%)	0.00
2. Click Register Submit				
OUTFIT IN LIVE A/B Test - 变体 1	24 (13.71%)	13 (37.14%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 原始版本	34 (15.60%)	17 (35.42%)	0 (0.00%)	0.00

Figure 20. Event: Register &amp; Click Register Submit

Figure 21 shows the data for event “Click 我想穿成 Ta Button” in Performance Information (Specific) Page. A total of 21 users clicked these buttons, indicating that these buttons can arouse curiosity and users are more willing to register in this scenario because they want to figure out how they can dress like the artist.

7. Click我想穿成				
OUTFIT IN LIVE A/B Test - 原始版本	14 (3.37%)	11 (7.05%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 变体 1	26 (8.64%)	10 (9.35%)	0 (0.00%)	0.00

Figure 21. Event: Click “我想穿成 Ta” Button

However, since the “我想穿成 Ta” button will direct user to Register Page, Login Page, and then go back to Home Page, users pay less attention to the “穿搭指南” Tab in Performance Information (Specific) Page, as shown in Figure 22 that there are only a few clicks on the Tab. As mentioned in the Usability Test Results, users may have no idea what the tab is about, so it is better to put this tab before “参演艺人” Tab, or even merge 2 tab content into same view.

10. Click穿搭指南				
OUTFIT IN LIVE A/B Test - 原始版本	10 (2.40%)	5 (3.21%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 变体 1	7 (2.33%)	5 (4.67%)	0 (0.00%)	0.00

Figure 22. Event: Click “穿搭指南” Tab

From Figure 23, we can see that users are interested in the recommendations so they click the “查看详情” buttons in Outfit Reference Pages of every artists. This proves that the website

can bring traffic to Taobao merchants.

事件操作 ?	事件总数 ?	唯一身份事件数 ?	事件价值 ?	平均价值 ?
OUTFIT IN LIVE A/B Test - 原始版本				
OUTFIT IN LIVE A/B Test - 变体 1	26 占总数的百分比: 3.25% (800)	15 占总数的百分比: 4.63% (324)	0 占总数的百分比: 0.00% (0)	0.00 平均浏览次数: 0.00 (0.00%)
OUTFIT IN LIVE A/B Test - 原始版本	30 占总数的百分比: 3.75% (800)	19 占总数的百分比: 5.86% (324)	0 占总数的百分比: 0.00% (0)	0.00 平均浏览次数: 0.00 (0.00%)
1. Click-Masaike-Check Detail				
OUTFIT IN LIVE A/B Test - 变体 1	2 (7.69%)	1 (6.67%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 原始版本	2 (6.67%)	2 (10.53%)	0 (0.00%)	0.00
2. Click-mozaiyang-Check Detail				
OUTFIT IN LIVE A/B Test - 变体 1	2 (7.69%)	2 (13.33%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 原始版本	7 (23.33%)	4 (21.05%)	0 (0.00%)	0.00
3. Click-Wutiaoren-Check Detail				
OUTFIT IN LIVE A/B Test - 变体 1	4 (15.38%)	3 (20.00%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 原始版本	8 (26.67%)	6 (31.58%)	0 (0.00%)	0.00
4. Click-Xinkuzi-Check Detail				
OUTFIT IN LIVE A/B Test - 变体 1	18 (69.23%)	9 (60.00%)	0 (0.00%)	0.00
OUTFIT IN LIVE A/B Test - 原始版本	13 (43.33%)	7 (36.84%)	0 (0.00%)	0.00

Figure 23. Event: Click Check Detail Button

Since the total Unique Events of “Click Register Submit” is 30, we can estimate that the registration rate is 52.6% (30 of 57), showing that users have a certain level of interest in this website. The feedback from the subjects also indicates that there is a market need for arranging outfit in music festivals (See in Figure 24).



Figure 24. Feedback from Subjects

### **Business Model**

In terms of the business model, the website will cooperate with Taobao merchants through a kind of reciprocal relationship. In Outfit Reference Page of each artist, the recommendations

can serve as advertising space, which means that if a merchant cooperates with the website, the website will recommend its products on a priority basis, attracting traffic to its Taobao store. The price of the advertising space varies from position to position, the more likely the area is to be seen by users the higher the price will be. For example, a position in the first three rows will be 2 HKD/month while a position in the fourth row to sixth row will be 1 HKD/month.

I sent messages to 8 merchants on Taobao asking about their willingness to work with this website, and although only 2 replied (半童 BANTONG & NOPMOB 皮囊商店, See in Figure 25), both of them indicated their willingness to cooperate as long as the website can bring some traffic. The 2 merchants have a relatively few followers on the platform (around 100,000, See in Figure 26), so I think the future cooperation should be with such new original design brands who need to expand their visibility, especially among young people. In this way, part of the website content will be offered by merchants, and since they will pay for the advertising space, the business can be sustained.

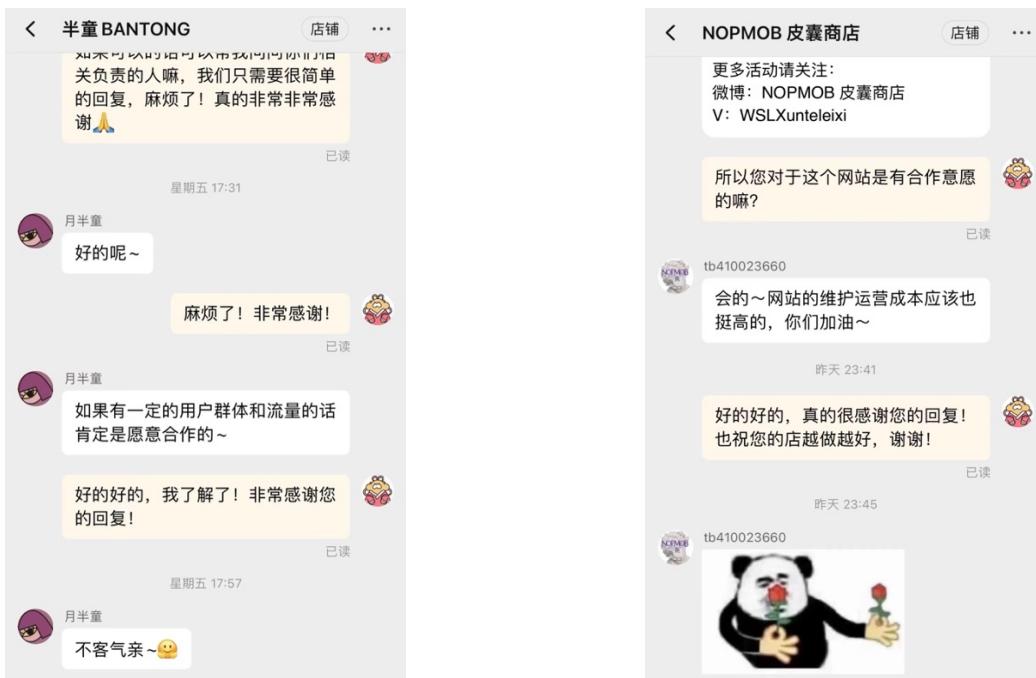


Figure 25. Screenshots for Inquiry Records



Figure 26. Screenshots for Followers of BANTONG & NOPMOB

### ***Recommendations***

For the further development, firstly, whether there is a market need for an Outfit Community where fans can upload their own outfits according to the music/outfit style of their preferred artists remains to be investigated. The development of this community may involve social functions such as making comments, following others and sending messages, which enable user-to-user interaction. Also, the favorite function can be added which allow users to save the music festivals, artists, and outfits they are interested about.

Secondly, how to better improve the recommendation is another important issue to be solved. The content quality is crucial to the sustainability of the website since it relies on the content to advertise and attract users. To solve this point, like function can be added at the bottom of each recommendation card, so that recommendations with fewer likes can be taken down and replaced in time. In addition, the way to get music style keywords and outfit style keywords is currently rather rudimentary so they are not very accurate and comprehensive. A better way to generate keywords deserves to be explored in the future.

Thirdly, the Outfit Reference Page of each artist may add an area showing the music festivals that the artist will be attending in recent times so that fans can learn about the artist's recent activities and decide whether to go to these festivals. In this way, the Outfit Reference Page and Performance Information Page are more closely linked together, retaining users on the website. Finally, filtering and search function need to be completed.

## Sources

1. Bootstrap Template: Colorlib-Mixtape <https://colorlib.com/wp/template/mixtape/>
2. “我想穿成 Ta” Button: CSS 按钮立体彩色样式 <http://www.bootstrapmb.com/item/9751>
3. Filter Box: JS 多条件筛选查询效果 <http://www.bootstrapmb.com/item/5947>
4. Visualization Map: Leaflet <https://leafletjs.com/>
5. Weather Forecast plug-in: 2345 天气网 <http://tianqi.2345.com/plugin/setting.htm>
6. Music Player plug-in: 网易云音乐 <https://music.163.com/>
7. Performance Information:
  - a) 大麦 <https://www.damai.cn/>
  - b) 秀动 <https://www.showstart.com/>
8. Artist Information:
  - a) 网易云音乐 <https://music.163.com/>
  - b) QQ 音乐 <https://y.qq.com/>
9. Background Images: <https://unsplash.com/>
10. Artist Photos: Weibo @彭磊新裤子, @庞宽新裤子国货教父, @赵梦 Kelsey, @五條人 WUTIAOREN, @马赛克乐队 mosaic, @莫宰羊 Goat; Instagram @goatergoat
11. Product Photos: Taobao 化学少女, 物理少年, 能猫商店独立品牌, weave studio, MODITEC, 半童 BANTONG, ALL BEINGS, 霓虹 NIHONG, DAIKO, NOPMOB 皮囊商店, THE NORTH FACE, NOSUICISM, LIMPIDOCULUS, NVGS, REINDEE LUSION, KRAKATAU CRISPR

## Appendix-1 Interview

Q：你看過的音樂節次數是幾次？

A：如果說那種戶外音樂節的話，其實是只有一次，但是如果說你要把那種特別大的室內電音節也算上的話，應該有十多次。

Q：你是出於什麼原因去看這些音樂節的？

A：一是週末想玩想放鬆，二是可能確實有特別想看的人什麼的，但我覺得第二種情況會稍微少一點，因為大部分特別想看的藝人也很昂貴，其實也是搞不起了。

Q：你一般是如何得知說有一個音樂節他在哪裡要開辦了的？

A：一般是他們的微信公眾號，就可能自己之前突然間感覺在廣州出來工作後比較無聊，就試著搜索了一大批從音樂節主辦方到那種酒吧的公眾號全部都關注了，就能通過公眾號來獲取他們的那種演出資訊，還有一種情況比較少見，可能有時候會去秀動來看的。

Q：如果是使用秀動的話，你一般是怎麼來進行這樣一個流程的？我想瞭解一下，比方說你輸入你想要獲取的信息，然後就直接點開，是這樣嗎？

A：我覺得當我打開秀動的時候，其實我所要的需求都是我有一段時間是空的，或者是我知道我跟朋友們想去哪個檔期，所以其實我是優先會選擇某個時間檔，然後去看檔裡面的活動。但我主流想要去知道音樂節資訊的方式，可能大多數還是通過活動主辦方給我推送，然後我才可以篩選哪些活動是我想去的，我就在這種情況下面可能是製造了需求。

Q：你可以現在點開一個你平時一直會有關注的相關的公眾號，隨意的點開一個可能你會想要去的微信推送，然後告訴我一下，你覺得他這樣一個信息呈現的方式對你來說是清晰的嗎？你能獲取到你所有需要的一切資訊嗎？

A：它其實這一篇裡面最吸引我的就是藝人，我可能當時正好在聽，它有很多很出名的藝人，而且票價只到120特別便宜，所以我當時就純粹被這兩個資訊吸引之後就很想沖，就沒有再關注更多資訊。我後面想了一下，如果說是我後續想補充這些信息的話，我可能會想知道附近的餐飲，然後第二是一些安全提醒，因為我當時去現場才發現，如果你在室內搞一個這麼多人的活動的話，特別會容易產生那種空氣感覺都不夠了，然後人踩人的感覺。

Q：你在到地觀演之前，除了想要知道附近的餐飲之外，你還想獲取有其他的資訊嗎？

A：其實我想獲取的資訊很多，可能比如說我剛買票之後，我第一件事情其實是先拉對找搭檔，如果說可以直接在某個地方去組隊，我覺得可能會更方便；然後第二的話開始研究穿搭，已經開始打開各種小網店，然後看什麼衣服就適合比較辣，但是我覺得這種資訊我不一定會想通過一些大的網站主辦方來知道，因為小紅書和淘寶已經能夠給足夠豐富的資訊了。但是我覺得可能會不同的活動，尤其是不同的音樂類型，其實是有自己的特色傳達的。這種稍微跟文化相關聯的信息，其實也很難在小紅書上有很系統的呈現。比如他們都要帶個什麼旗子，都要搞一個那種標的物進來，彰顯自己是音樂人的粉絲，我就覺得這個資訊可能是我在小紅書完全得不到的，跟文化相關那種穿搭的東西。

Q：這些方面的東西，其實你更多是需要通過可能其他比較有經驗的人來告訴你說，這些新手是需要注意這些問題的是嗎？

A：對，但他可能不算注意問題，就可能錦上添花，你才更顯得自己很懂，像個懂王。然後第三件事情就是藝人的歌，因為其實現在國內大部分音樂節的藝人都是那種一兩個頂留下來很多新生代，然後那些新生代藝人其實是非常需要了解他們到底是什麼歌火，可能一篇活動推送是放不下那麼多藝人介紹的。

Q：你一般是怎麼去瞭解說這個人他的什麼歌火，你是通過什麼平臺去知道這件事的？

A：我真的都會打開網易雲，然後去搜每個藝人，然後看他最近熱門歌曲什麼的。

Q：你會在去之前先去聽一聽這樣？

A：對，是的，其實都會聽，包括其實去每次音樂節，也會提前一天可能就是用網易雲把他的歌大致聽一遍，不然就會覺得說可能去了就跟白去一樣。

Q：你在購完票到到地觀演之前，做行程上的規劃，比方說怎麼去怎麼回這些，怎麼來完成這件事的？比方說用什麼平臺，然後從哪裡獲取資訊？

A：我可能就會把它當成一次普通的旅遊規劃來做，就可能再確認一下它的地址之後，就會用攜程或者airbnb來搜附近的那種住宿之類的，然後還會搜附近的餐飲什麼的，但是一般我覺得搞音樂節的地方附近都很荒涼，都不是什麼成熟的商業區，所以酒店其實無所謂，是餐飲，可能你真的很難找到一個就是本地人在吃的餐飲，因為那裡面大部分餐飲其實也不會上大眾點評之類的一些網站。

Q：一般你已經到場地了之後，你覺得你需要獲取的是哪些資訊？

A：我覺得是演出資訊，一些戶外音樂節它可能會有幾個場地，然後每個場地可能又離得很遠，但是一般主辦方可能就給張小紙，我覺得就這種展現方式其實不太智慧，我覺得最理想的呈現方式就是比較智慧，可以告訴我在這個時間段就有哪幾場演出，然後在什麼地方，我就知道我離哪些場地分別有多遠，這是第一個。然後第二個我特別想知道的是人多不多，本來在這個場地已經佔到了前排，然後我看到一個我特別想去的演出，然後都花10多分鐘走過去，結果我已經擠不進去，這種情況其實我覺得蠻多的，所以我很想知道他現場的人流情況多不多，就跟迪士尼APP一樣，我就可以知道每個專案的排隊時間，我也想知道每個場次現在的人流情況，然後我預計離舞臺要多遠，就是可以給個多少米的那種直觀參考。

## Appendix-2 Usability Test Result for Wireframe Prototype

This prototype is a functional combination of Ticketing Websites and Red Book where users can not only get the information of music festivals but can also find ideal dressing for music festivals. Compared to Ticketing Websites, the prototype directly shows the lineup so that users can see it without clicking. And the prototype also provides local weather information, dressing index and dressing tips for users, which the competitor does not have.

The image shows two versions of a music festival ticketing page for the "【舟山】2021舟山东海音乐节".

**Competitor:** This version is a standard ticketing website. It features a large image of the festival, event details ("【舟山】 2021舟山东海音乐节", "舟山 | 舟山市朱家尖南沙景区沙滩", "2021.11.27-11.28"), a price range ("280-399 元"), and a button ("购票中").

**Prototype:** This version is a wireframe. It includes the same basic information but adds a large red 'X' icon over the main image area. To the right, there is a section titled "参演音乐人" (Performing Artists) listing artists like莫宰羊, 阿肆, RETURN THE TRUTH, SKY KING JACK, etc., along with their respective album covers.

For the artists' information, the artist's personal music style and hit songs are provided by the prototype while such information is not provided by the competitor.

The image shows two versions of an artist profile for "莫宰羊".

**Competitor:** This version is a standard profile page. It features a large image of the artist, his name "莫宰羊", his region "台湾", and style "HipHop". Below the image, there is a brief biography: "莫宰羊，1992年10月23日出生于台湾花莲，为饶舌团体BackMountCrew（前身BackMountKrew 莫山王子）一员，被称为“怪物天才少年”。17岁出道，仅一年多时已成为台湾新生代Rapper的代表人物。他的作品回向说唱音乐的初语，回应社会与世界的观察，风格独特猛烈。他的三首单曲每一出来便霸占南声榜榜首，无法被定义的风格。这位来自花莲的少年所在他的都是在刷新世界对华语Rapper的定义。"

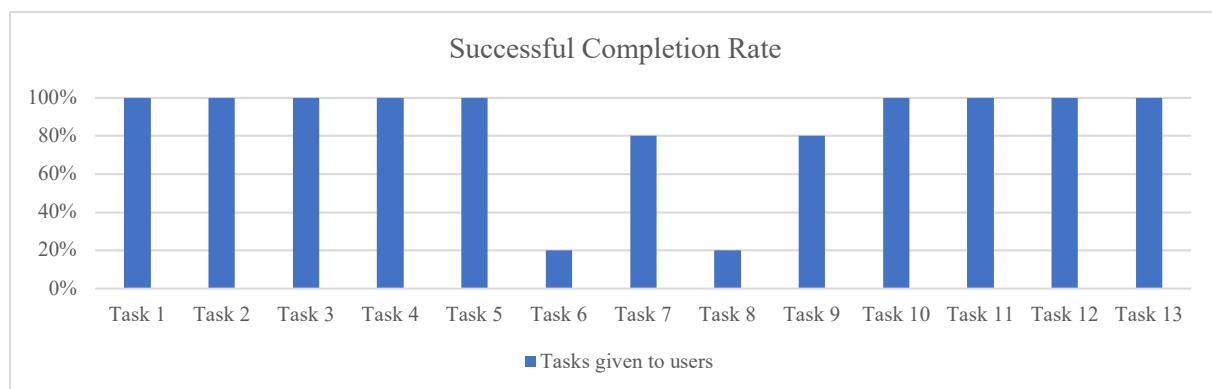
**Prototype:** This version is a wireframe. It includes the same basic information but adds a large red 'X' icon over the main image area. To the right, there is a section titled "热门作品" (Hot Works) listing tracks like "未接来电", "健康快乐", "鱼", "翅膀仔", and "返乡列车".

## 1) Test Tasks

1. Register
2. Log in
3. Find the music festival that you want to go
4. Find local weather information
5. Find the appropriate clothing type
6. Figure out the overall style of the festival
7. Figure out the artist's dressing style
8. Find the same dressing with the artist
9. Find the T-shirt of which the style is similar to the artist's dressing/music style
10. Save dressing that you are interested in
11. See other fans' dressing for the festival
12. Find photo-taking tips
13. Find the festival, artists and dressing that you saved

## 2) Effectiveness

### 2.1 Completion Rate



### 2.2 Errors Summary

Task	Error Rate	Error Type	Description	Counts
Task 6	0.8	Omission	Omission of information on artists	3
		Omission	Omission of overall dressing keywords	1
		Unintended Click	Click on Cast Table	1
Task 7	0.8	Unnecessary Slip	Slip upwards	2
		Not Click	Not click	1

Task 8	0.8	Wrong Click Wrong Click	Click on Dressing Album Click on Fans Dressing	4 1
Task 9	0.6	Try to search Omission	Not allow to search Omission of Recommendation	1 1
Task 12	0.6	Omission Wrong Click	Omission of Photo-taking tips in navigation bar Click on Dressing Album	1 2

### 3) Efficiency

Task Time Per Task Per Participant (Unit: seconds)

Task: 1-13      Participant: A-E

	1	2	3	4	5	6	7	8	9	10	11	12	13
A	1s	2s	10s	16s	11s	6s	15s	15s	8s	2s	3s	6s	3s
B	1s	1s	5s	3s	2s	×	18s	×	10s	1s	5s	×	7s
C	1s	3s	4s	1s	5s	×	×	×	×	1s	2s	2s	3s
D	1s	1s	5s	1s	2s	×	22s	×	19s	1s	2s	13s	2s
E	1s	1s	3s	2s	1s	×	14s	×	6s	1s	2s	2s	1s
Efficiency	1	0.77	0.22	0.58	0.46	0.03	0.05	0.01	0.09	0.9	0.41	0.25	0.46

### 4) Satisfaction

#### 4.1 Task Level Satisfaction – Single Ease Question

Very Difficult (score:1) → Very Easy (score:7)

Task	1	2	3	4	5	6	7	8	9	10	11	12	13
Difficulty	6	6	5.6	6.6	6.4	6	5.6	4	5.4	5.8	6.4	6	6.8

#### 4.2 Test Level Satisfaction - SUS

Questions	Strongly Disagree	Disagree	Normal	Agree	Strongly Agree
I think that I would like to use this system frequently.	0(0%)	0(0%)	2(40%)	3(60%)	0(0%)
I found the system unnecessarily complex.	1(20%)	0(0%)	2(40%)	2(40%)	0(0%)
I thought the system was easy to use.	0(0%)	0(0%)	0(0%)	3(60%)	2(40%)
I think that I would need the support of a technical person to be able to use this system.	2(40%)	2(40%)	1(20%)	0(0%)	0(0%)

I found the various functions in this system were well integrated.	0(0%)	0(0%)	0(0%)	4(80%)	1(20%)
I thought there was too much inconsistency in this system.	1(20%)	3(60%)	1(20%)	0(0%)	0(0%)
I would imagine that most people would learn to use this system very quickly.	0(0%)	0(0%)	0(0%)	2(40%)	3(60%)
I found the system very cumbersome to use.	1(20%)	3(60%)	0(0%)	1(20%)	0(0%)
I felt very confident using the system.	0(0%)	0(0%)	0(0%)	4(80%)	1(20%)
I needed to learn a lot of things before I could get going with this system.	2(40%)	3(60%)	0(0%)	0(0%)	0(0%)
SUS Score	76				

## 5. Conclusions

Generally speaking, the main problems arise in Tasks 6, 7, 8, 9 and 12, especially 6 and 8.

For Task 6 (Figure out the overall style of the festival), the completion rate (20%) and efficiency (0.03) are quite low, but error rate (0.8) is quite high. 3 of 5 participants failed to pay attention to the “参演音乐人”and “热门曲目”of the artists provided while 1 of 5 participants failed to pay attention to the overall style keywords, so it is better to design some guide words to instruct users to combine two types of information. Also, users can be prompted on the “演出信息” page to click on the festival profile to get all the information about dressing in the festival, so they can have expectations about the search results. However, whether it is unnecessary to introduce too much information about the artists, which will blur the focus of the website’s functions, needs further tests.

For Task 7 (Figure out the artist’s dressing style), the completion rate is 80%, the efficiency is 0.05 and the error rate is 0.8. The main reason for its bad performance is that participants didn’t expect that if they click on the artists profile, the website will turn to “穿搭参考” page. Therefore, users should be given some hints to do the click. Moreover, most participants didn’t

realize that “穿搭相册” is also provided for them to finish the task.

For Task 8 (Find the same dressing with the artist), the completion rate (20%) and efficiency (0.01) are quite low, but error rate (0.8) and difficulty are quite high. 4 of 5 Participants did a wrong click that they clicked on “穿搭相册” and they thought it would show the same dressing as the artist's. So for the artist's same dressing, it is better to put it into “穿搭相册”, meaning that the users will firstly check the dressing photos of the artist, then a link will be given to them under the photo so that they can directly click the link for the same dressing that they are interested about.

For Task 9 (Find the T-shirt of which the style is similar to the artist's dressing/music style recommended for the festival), the completion rate is 80%, the efficiency is 0.09, the error rate is 0.6 and the difficulty score is 5.4. 2 of 5 participants told that the name “本站推荐” confused them, because they couldn't expect what the content would be. As a result, the name should be changed to an easily understand one.

For Task 12 (Find photo-taking tips), the efficiency is 0.25 and the error rate is 0.6. 1 of 5 participant failed to pay attention to the “拍照 TIPS” in the navigation bar because she didn't expect that the it would be there. 2 of 5 participants did a wrong click that they click on “穿搭相册” because they thought the dressing tips would appear together with dressing photos. It seems that participants didn't think it is necessary to have a single page for dressing tips so it may be removed in later versions.

In addition, there are some inspirations as follows:

- Users are more likely to use the search function rather than filtering, and the more powerful the search function, the better.

- It may be better to provide more attractive information directly on the home page of the website, such as selected content.
- Regarding “粉丝穿搭”, it is more like an online community where fans can share their dressing and interact with each other, not where users can get specific information, so it may be better to set up a single page which has an entrance in navigation bar and allow functions such as comments and replies.