Final Project Report

Disney Princess World

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Contents

Introduction

Disney is a worldwide top brand that has huge cultural impact on the whole world through cartoons, theme parks, and all kinds of derivative products. And the Walt Disney company has attracted young girls through their Disney Princess Sector for years. From the 12 officially recognized princesses to countless unofficial princesses, these characters embody not only their respective mythologies, but a mode of being for young budding consumers to identify with.

"Disney Princess World" is a cultural study website dedicated to providing comprehensive knowledge about Disney Princess. Beginning with the brief introduction of princesses, this website also offers information about princess movies, theme parks and derivatives. Under the condition of lack of such websites exclusively designed for Disney princesses, "Disney Princess World" will satisfy its target users with design thinking throughout the data driven producing process.

Strategy

SITE OBJECTIVES		TARGET USERS		USER NEEDS
Primary Goal	Play a role in Disney cultural study	Primary User	Academics and students who conduct relative cultural study	Refer to the website in the study process
Secondary Goal	Become an information source of Disney princess	Secondary User	Young girls interested in Disney princess	Get various content about Disney princess
			Adult females growing up with Disney princess	

Figure1. Site Objectives and User Needs

Site Objectives

When planning a website, it's top priority to set clear site objectives. As for my website, there are two main goals - one is playing a role in Disney cultural study and the other is becoming an important information source of Disney princess. For one thing, cultural studies of Disney princess mostly focus on its bad influence on girls, paying little attention to the evolutionary figure of modern Disney princesses. This website, through presenting princess's evolution, aims to change the preconceived idea and stereotyped image of Disney princesses, by which way to play a role in Disney cultural study. For another, there are no such comprehensive websites specially designed for Disney princess. When people want to get general knowledge of Disney princess, they can only visit the official website of Disney, in which there are too much irrelative information.

User Needs

As for the primary goal of my website, which is to play a role in Disney cultural study, academics and students who conduct related cultural study are the target users. What they need is to refer to the website in the process of study. In this respect, whether they can find quality and useful content in my website is the key. For the secondary goal of my website, which is to become an important information source of Disney princess, both young girls interested in Disney princess and adult females growing up with Disney princess are my target users. As Walt Disney himself once quoted "Your dead if you aim only for kids. Adults are only kids grown up, anyway." Therefore, my website focuses on multi-generation rather than just children.

In order to identify user needs precisely, I interviewed several target users, including young girls in middle school and friends of mine who have the experience of watching Disney princess movies. They told me that they would visit different websites if they need multiple information about

Disney princess. For example, they might look up princess profiles in Wikipedia and use Youtube to see a princess film. However, the official website of Disney was seldom mentioned, which was thought by all my interviewees user unfriendly after a testing use. When it comes to a brand-new website specially designed for Disney princess, functions most frequently mentioned were providing basic information of princess, playing princess movies, directing the way to see princess in Disney parks and displaying derivative products. According to the interview, I basically understand the needs of my secondary target user group, and I will make full use of the interview result to determine the scope and establish the structure of my website.

Scope

On the basis of specific site objectives and user needs for emphasizing the problem, I then need to define the problem and make sure the scope of my website. I make a journey map and user personas for showing functional specifications and content requirements, which are useful in collection and classification of users' stories. Because my website aims to provide available information for both primary and secondary target users, whose journey are similar to some extent, so I only make one journey map for the two user groups.

Journey Map

Journey is the process between a start and end point through which the user can have one's needs satisfied by accepting the offering. In my website, the users' journey is from the original need of getting specific information into somehow making use of the content found in my website. (See Figure 2)

	起 Background	承 Challenge	转 Response	合 Result
人物 Persona	- Academics and students who conduct relative cultural study - Young girls interested in Disney princess - Adult females growing up with Disney princess			
场景 Context	- Research activities - Leisure scene	- Network	- My website	- Research activities - Leisure scene
物件 Artefacts	- Search engine and online platform	- Promotion content of my website	- Website content	- Website content
用例 Use Case	- Want to get specific information about Disney princess for some objectives	- Search online but can't find satisfactory content elsewhere	- Visit my website and get targeted content in my website	- Use content in my website to complete initial objectives

Figure2. Journey Map

Persona

As there is no one around me conducting Disney princess cultural study, I only create personas for the secondary target user. After talking with several interviewees, I synthesized their information to abstract some outstanding features and then made a comprehensive persona. (See Figure 3)

Persona – Secondary Target User	

- **Gender:** Female
- **Age:** 11-28
- **Occupation:**
  • Student
  • White-collar worker
	- **Media use habit:**
	  • Find everything on the internet
	  • Enjoy watching videos online
	  • Use social media very often
	- **Characteristics:**
	  • Grow up with Disney princess
	  • Keep childlike innocence
	  • Have leisure time
	- **Goals:**
	  • Get various content about Disney princess
	- **Frustrations:**
	  • Can't find comprehensive information in one site

Figure3. Persona

After deliberation in user's persona and journey, I identify the compelling reasons for the persona to choose my website's offering over the others, which is comprehensive information in one site. Through synthesizing recurring persona, contexts, artefacts, and scenario patterns, I formulate the problem finally. Below is the problem statement of my website:

How can "Disney Princess World" helps people who are conducting relative cultural study or interested in Disney princess get comprehensive information of value to complete their initial objectives?

Structure

Site Map

On the basis of distinct definition of the question, I begin to ideate the solution. To solve the problem stated above and build a socio-cultural and technical system for reshaping user stories, I would develop "Disney Princess World" into four sections - *Overview*, *Movies*, *Theme Park* and *Derivatives*, with each section including sufficient content that could gratify both primary and secondary target users.

To help users find specific information in a short time, a site map is made first for a systematic view of my website. (See Figure 4)
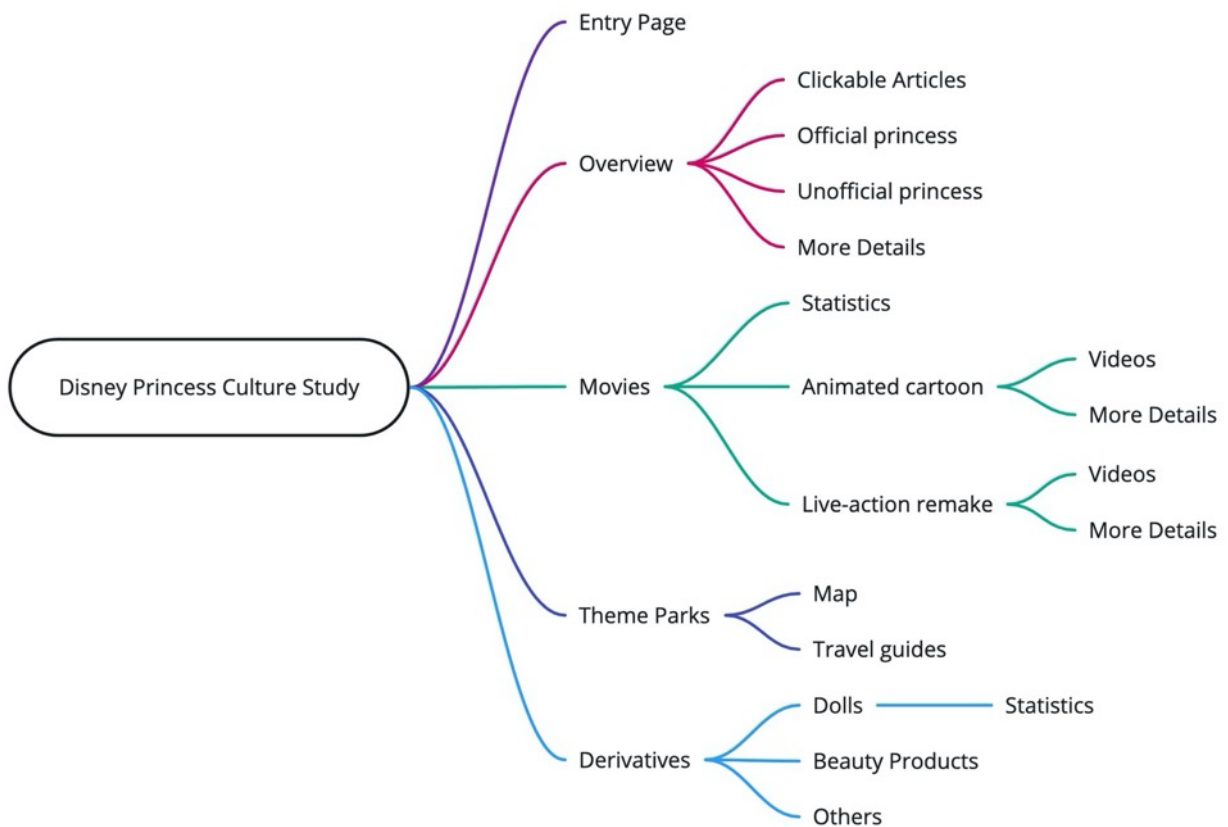

Figure4. Site Map

Skeleton

Wireframe

Based on the abstracted framework of my website, a low-fidelity prototype is then developed in the form of wireframes. In this step, a primitive information architecture is designed, which aims at combining the art and science of structuring, organizing, labeling and navigating.

Below is the wireframes of "Disney Princess World", and there are five pages presented altogether, which are *Entry* page, *Overview* page, *Movies* page, *Theme Park* page and *Derivatives* page. (See Figure 5-9)
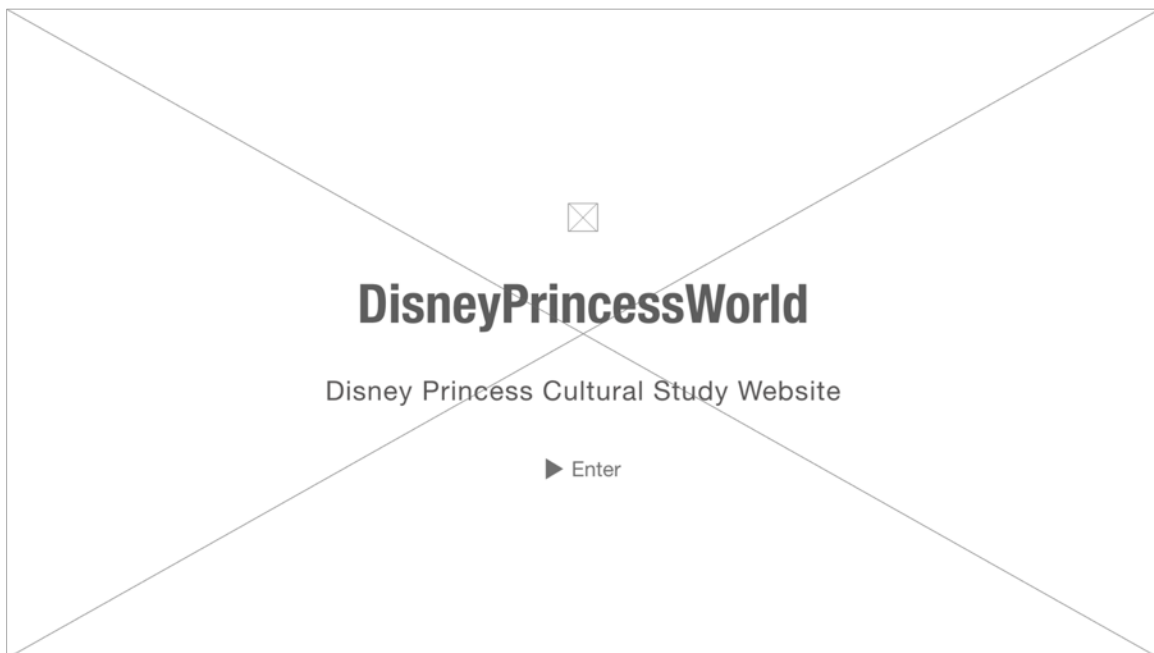
Figure5. Wireframe - Entry Page

Clickable Articles

Overview for Disney Princess Culture

Official Princess | Unofficial Princess

Official Princess

Click to know more about each official princesses.

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Princess Name

Unofficial Princesses

Click to know more about each unofficial princess.

Princess Name	Princess Name	Princess Name	Princess Name
Princess Name	Princess Name	Princess Name	Princess Name
Princess Name	Princess Name	Princess Name	Princess Name
Princess Name	Princess Name	Princess Name	Princess Name

To know more details about Disney Princesses, click on the button below.

OPEN

DataTable about Princess Information

(show after clicks on "OPEN" buttons)

Disney Princess World

Home   Movies   ThemePark   Shopping
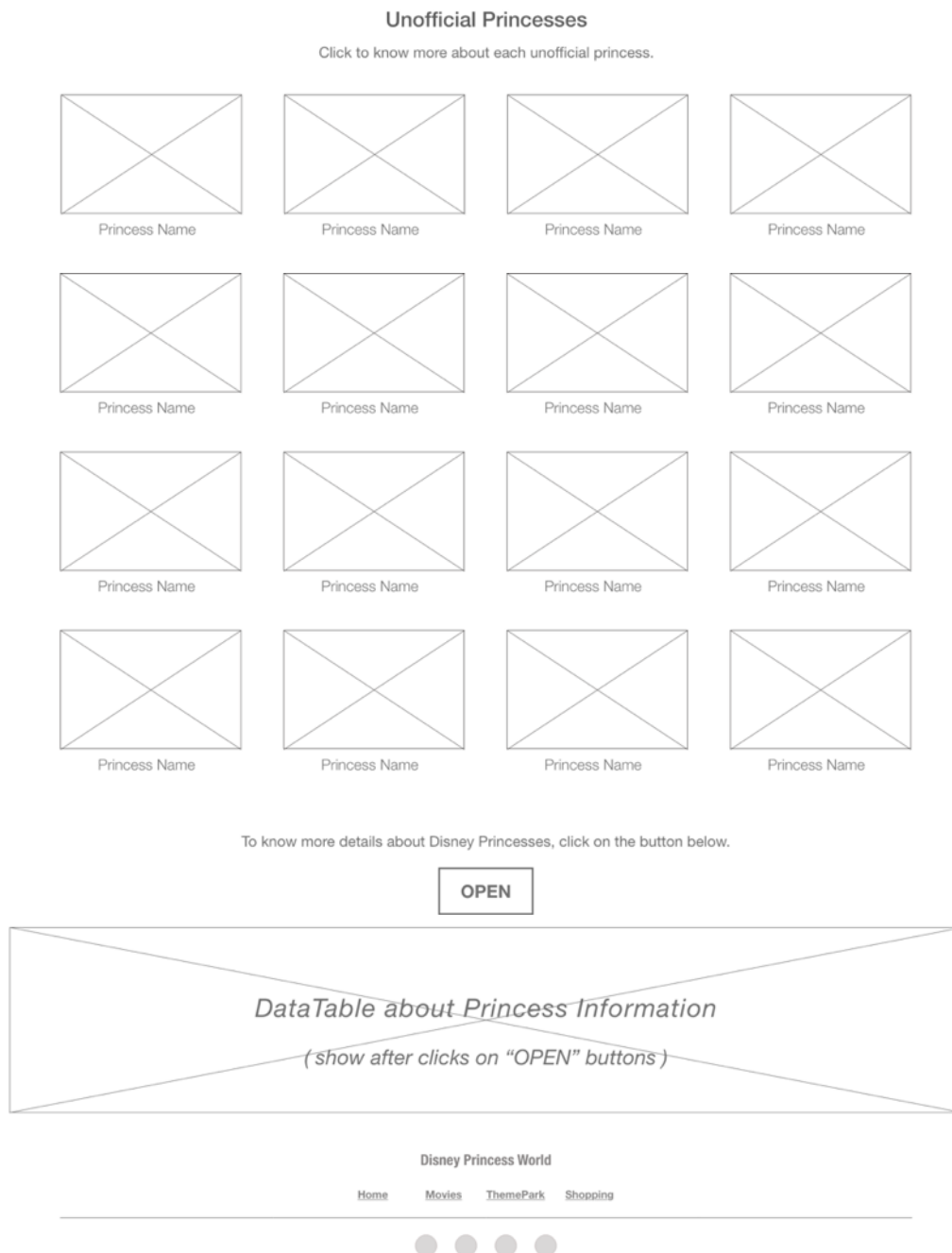
Figure6. Wireframe - Homepage

Banner

All about Disney Princess Movies

Statistics | Animation | Live-action

Statistics

| Step 1 | Step 2 | Step 3 | Step 4 |

Charts and DataTables about Disney Princess Movies

(show after clicks on "Step" buttons)

Animation

Movie Trailer

| *Video* | *Video* | *Video* | *Video* |

Full Movie

Movie Name   Movie Name   Movie Name   Movie Name

More Details

OPEN

Embeded Airtable about Princess Animation

(show after clicks on "OPEN" buttons)

Live-action Remake

Movies Gallery

Movie Name   Movie Name   Movie Name   Movie Name

More Details

OPEN

Embeded Airtable about Princess Live-action Remake

(show after clicks on "OPEN" buttons)

Disney Princess World

Home   Movies   ThemePark   Shopping

● ● ● ●

Figure7. Wireframe - Movies Page

Princess Theme Parks

Where people can have first-hand experience of Disney Princess Culture

Theme Park Map

See Parks in California

▲ Ariel's Undersea Adventure

▲ Snow White's Scary Adventures

See Parks in Florida

▲ Journey of the Little Mermaid

▲ Enchanted Tales with Belle

▲ Seven Dwarfs Mine Train

Travel Guides

Here are Travel Guides from tripadvisor.com

Theme Park Name	Theme Park Name
Open	Open
Theme Park Name	Theme Park Name
Open	Open
Theme Park Name	Theme Park Name
Open	Open

Disney Princess World

Home   Movies   ThemePark   Shopping

● ● ● ●

Figure8. Wireframe - Theme Park Page

Figure9. Wireframe - Derivatives Page

As the wireframes shown above, the navigating system is consistent throughout the website, with two navigation bars separately placed in the header and the footer sections of each page. Concretely speaking, the ***Entry*** page shows the name and the positioning statement of this website, and at the

same time offers a button for entering the website; the ***Overview*** page provides clickable carousel images led to news and articles about Disney princess culture in the page head, below which is the introduction section for each official and unofficial princess, besides, there is a button for opening a table of detailed princess information at the page end; the ***Movies*** page begins with statistics of movies data in the form of charts and tables, the rest of the page is divided into animation section and live-action remake section, with video gallery of movies and more details after clicking the "open" button; the ***Theme Park*** page contains not only a map pointing out five princess theme parks, but also travel guides from *tripadvisor.com* for each park; the ***Derivatives*** page has included two main kinds of princess derivative products till now, which are dolls and beauty products, and there is also data statistics and analysis of dolls in Disney store.

Qualitive Test Using Wireframe

To see how visitors will actually use my site, I conducted a five users usability study with the wireframes of my website. I invited five volunteers who are in accordance with my target audience to accomplish the usability test. Those "users" are all young females at their early twenties and have the experience of watching Disney princess movies. In order to get better insight into my website design and identify the majority of the usability issues, I divide testing sessions into testing phase and post-testing phase. I conducted the test with a computer to imitate the real user flow, and let my volunteers move mouse around as what they would do in a normal website. In addition, I told them all they need to do was to think aloud during the test and tell the truth about their genuine feelings. Below are the 7 questions and a summary of five users' feedback.

Testing Questions:

Q1. How can you get basic information about Disney princesses?

Q2. How can you watch the Disney live-action remake *Aladdin*?

Q3. How do you find the way to see princesses in Disneyland?

Q4. How do you know how many kinds of princess dolls there are?

Post-Testing Questions:

Q5. Is the navigation and layout clear enough? If not, which part confuses you?

Q6. Which part do you think need to be improved?

Q7. Are there any other functions or contents you expect to see on this website?

For the testing phase, all four questions aimed to let users accomplish some basic tasks through navigating the website on their own. I, meanwhile, observed how they clicked on the wireframes to complete the test. In general, all the five volunteers successfully achieved four tasks in very short time. As I observed, the participants moved their mouse straightforward throughout the website and then found corresponding functions quickly and accurately. What they said when navigating the website were basically "maybe I can find it in the navigation bar", "I think I can click here" and "that's clear". Both their word and action revealed that the website did well in the navigation system, which was very helpful for them in getting information. There was only one exception that user2 felt a little confused about the data table and chart shown in the movies page, but this would be no longer a problem when the data is imported actually.

For the post-testing phase, all the five participants appraised the navigation and layout of the website as clear, logical and easy to use, which could basically validate the simpleness and clearness of my website. In addition, five users offered valuable comments and recommendations from diverse perspectives to the site. User1 and user3 separately told me their expectations for my website, which were a function of voting for favorite princess and selfie function using princess filters. As for the two proposals, I was really interested but they were beyond my ability, so I had to put it aside. User4 argued that the huge banner in theme park page is unnecessary as the map

below seemed to be more important. I thought her suggestion was rational, so I removed the banner in theme park page and had the map enlarged. As to user5, the only problem she referred to was that a simple black-white wireframe couldn't display the authentic effect, which would be solved when the website has been established practically.

After summarizing all my findings through the usability test process, I prioritized the recommendations based on those findings and made a modified version of my website wireframe.

Surface

Screenshots

After refinement based on the usability test with low-fidelity wireframes, I then get down to practical design of my website. Basically, I develop the website through coding on my own with the help of some bootstrap components and utilities. (See Figure 10-14)

To see more details, please check via: https://tessalyr.github.io/comm5961/final_project/entry.html

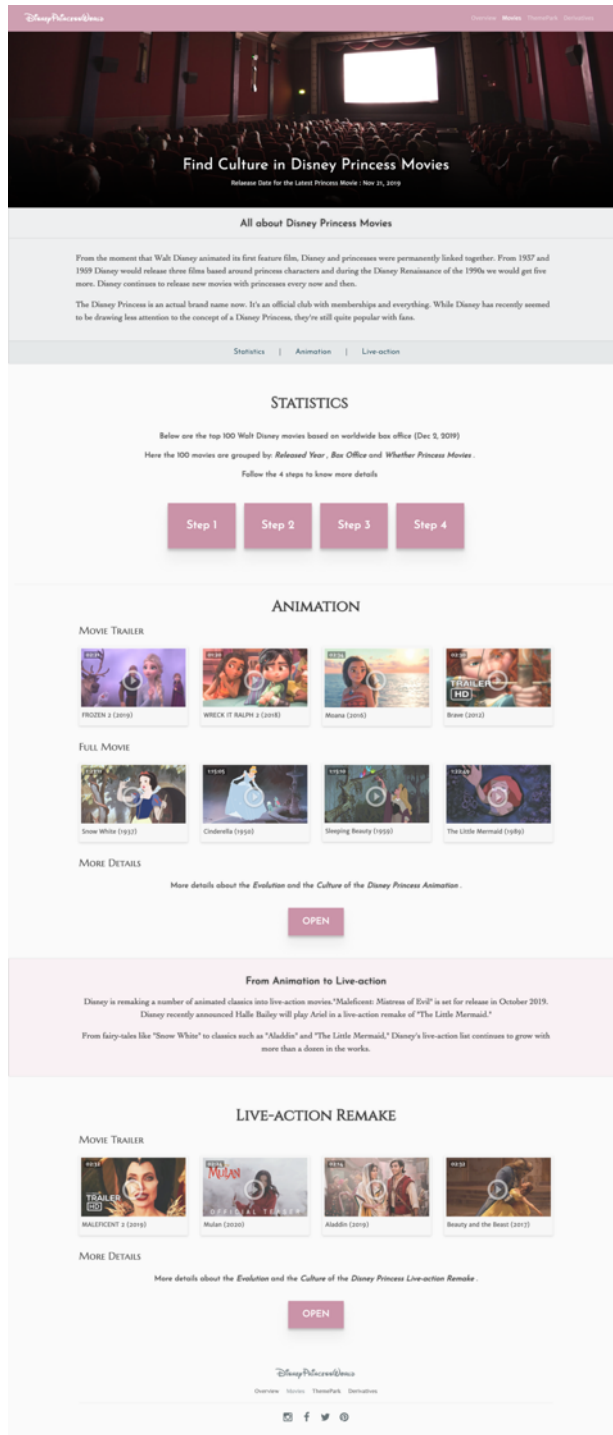Figure10. Entry Page
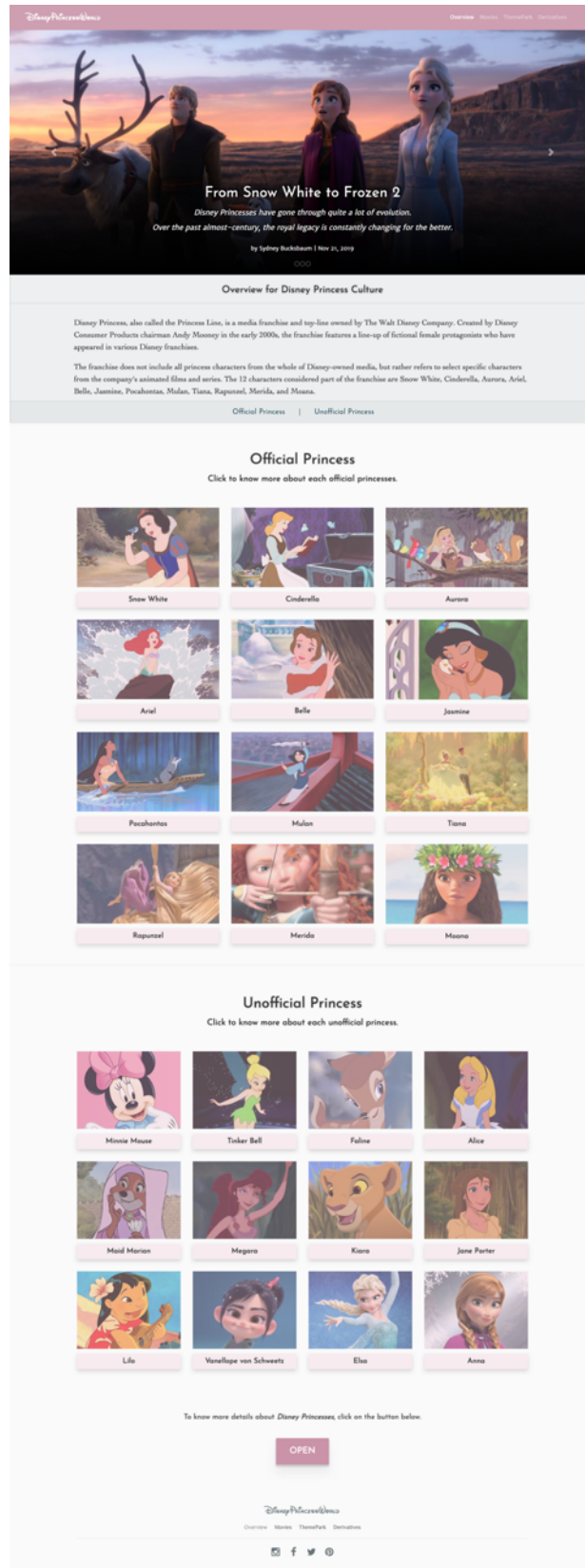
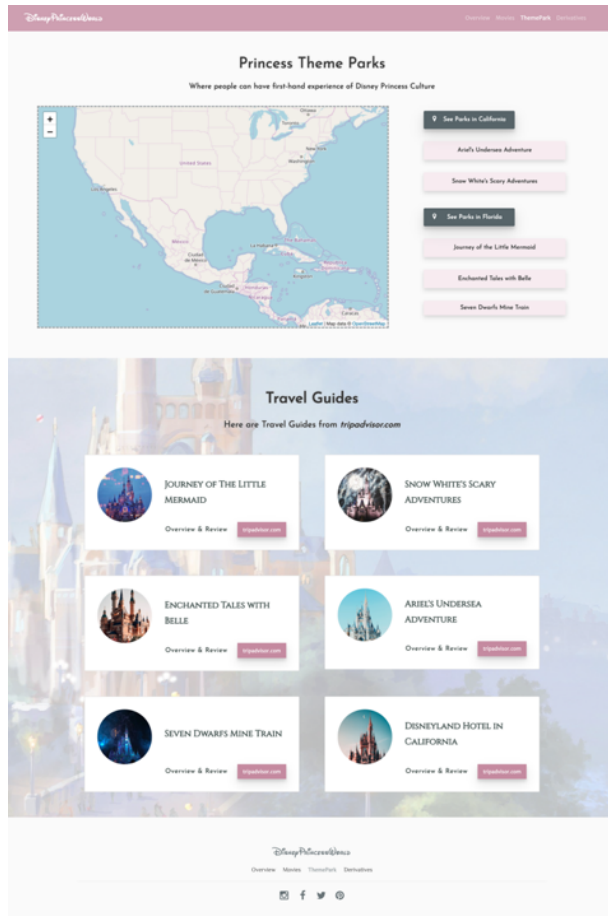*Figure11. Overview Page*

Figure12. Movies Page
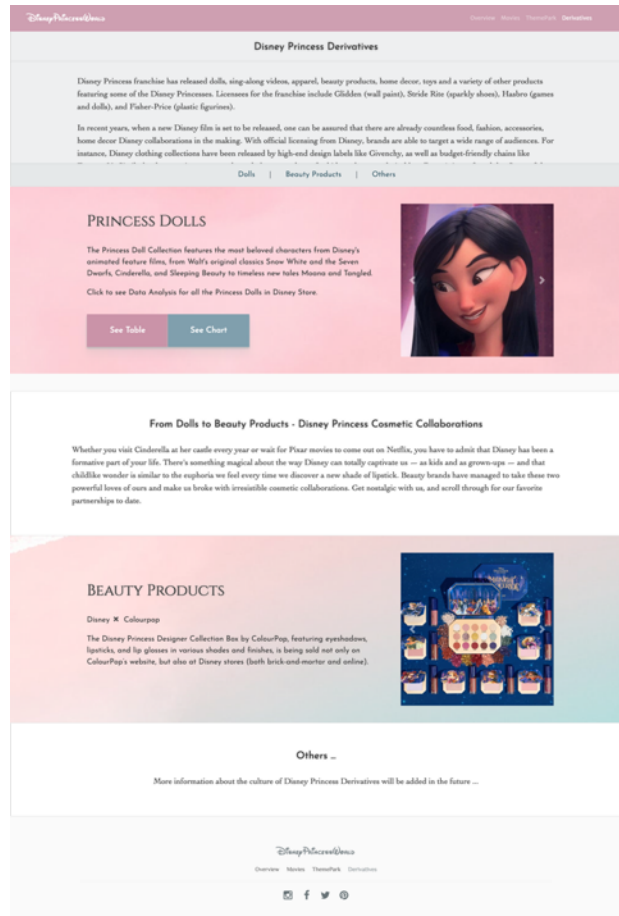
Figure13. Theme Park Page

Figure14. Derivatives Page

Think Aloud Testing

With a rough prototype of my website, I conducted a think aloud test to identify if there was something unreasonable in structuring, organizing, labeling, navigating or interface design. In this phase, I invited two volunteers to freely navigate in my website while thinking aloud in the meantime. Both of the participants offered several suggestions of value that were then adopted by me.

First, the interface design should be more coherent. The alignment of some text changed between pages and the theme color wasn't distinct enough as a result of some unexpected use of another color in several parts. Therefore, I aligned the webpage content in a more constant pattern and

altered some improper color into pink of different brightness to make the website more unified. Second, some functions should be emphasized in some way. For example, the navigation in the footer section couldn't show the current page, hence I highlighted the current page by the way of changing its color. Third, some functions in my website didn't conform well to the common use habit. For instance, the button for opening a hidden section is also used for closing it in general, so I replaced most of the "show" and "hide" button groups in my website by one button with "toggle" function.

A/B Testing

After some modification in the qualitive think aloud test stage, I conducted an A/B test as my primary quantitative usability test. Because the *Entry* page is the first page that visitors meet, whether it is attractive enough will influence the further exploration of my website a lot. Therefore, I chose *Entry* page as the testing page. (See Figure 15&16)

The variation I made between A version and B version is about the font size. In the original version, the size of the website title "Disney Princess World" is notably larger than the positioning statement - "Disney Princess Cultural Study Website", while in the variant, the website title is contracted to a smaller size compared with the positioning statement. I set bounce rate as the website functionality I wished to optimize. Through calculating the experiment bounces of both versions, I could pick out the more effective way for encouraging visitors to access my website and explore more.

Figure15. A/B testing – A version

Figure16. A/B testing – B version

I started the test on 28 November 2019, and by 9 December 2019, there were 240 sessions created altogether after 12 days of running. As is shown below, the experiment bounces of version B is 19, which is a little smaller than the version A of 22. And the calculated bounce rate of version A is

17.46% compared with 16.67% of version B. However, the chart also illustrates that the probability of the variant to beat original is 46% on the metric of bounce rate. Viewed from this perspective, I would pick version A even if the variant version seems to perform better. (See Figure 17&18)
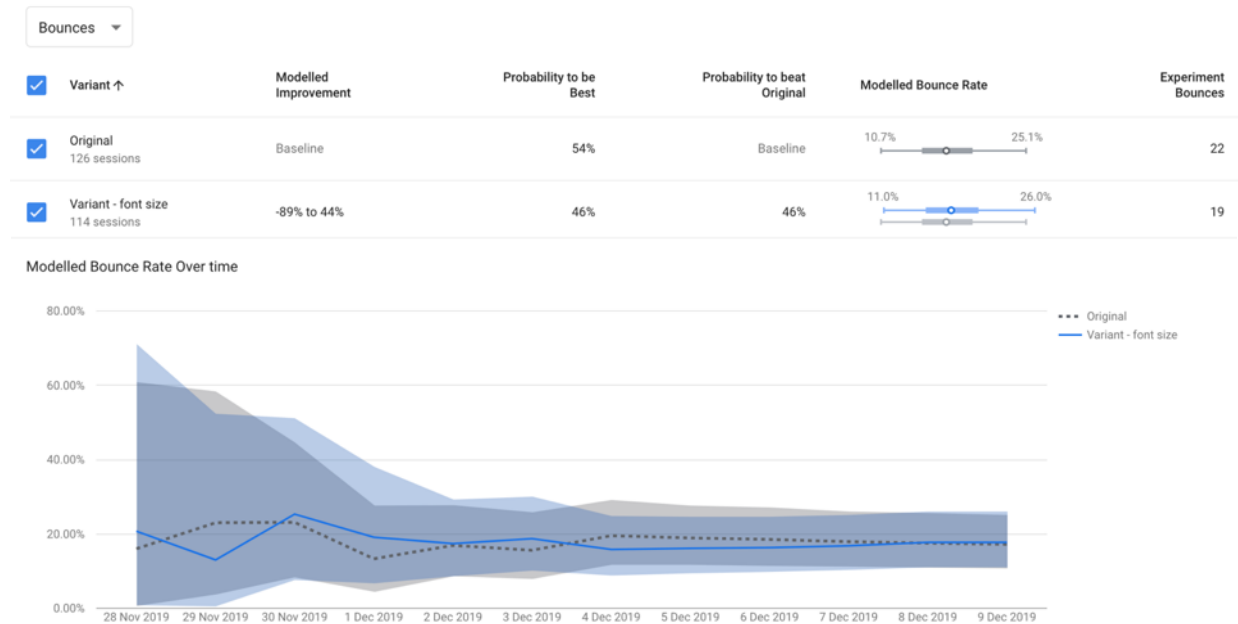

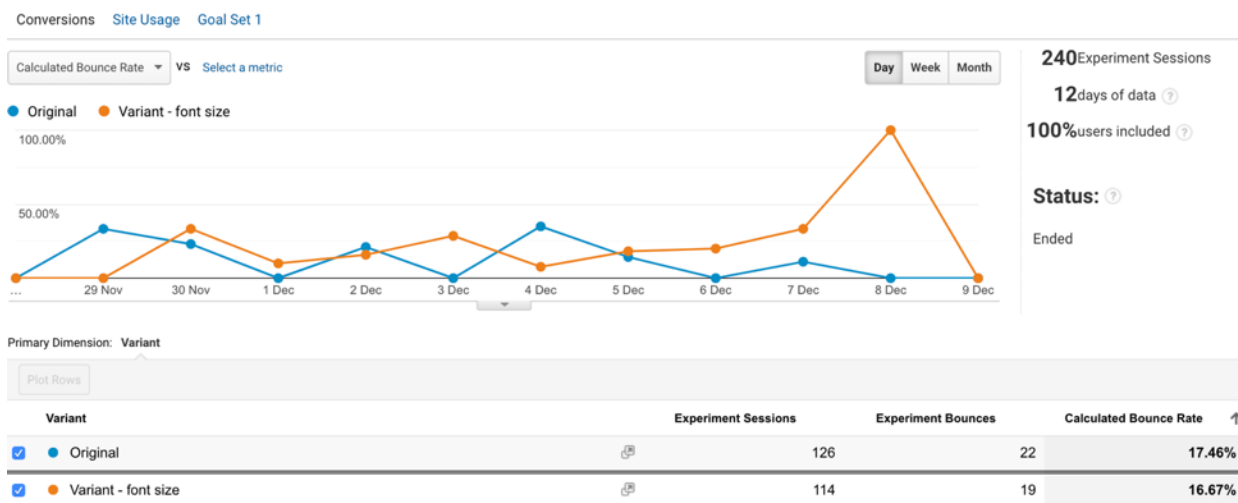*Figure17. A/B testing – Comparison based on Bounce Rate*

Figure18. A/B testing – Comparison based on Conversions

Performance Analysis

When I had accomplished the whole design process of my website, I published the site and carried out performance measurement in the meantime. In terms of the performance measurement tool, I used Google Analytics for tracking and reporting my website traffic. I first connected my website to the analytics platform and set 3 goals used for reflecting the conversion, which are "Destination of *Overview* page", "4 pages per session" and "1 min of duration". Then, during the 12-day website running period, Google Analytics conducted data collection and analysis automatically. As is shown below, there are 169 users of my website who created 296 sessions totally, with approximate 1.75 sessions per user. (See Figure 19)
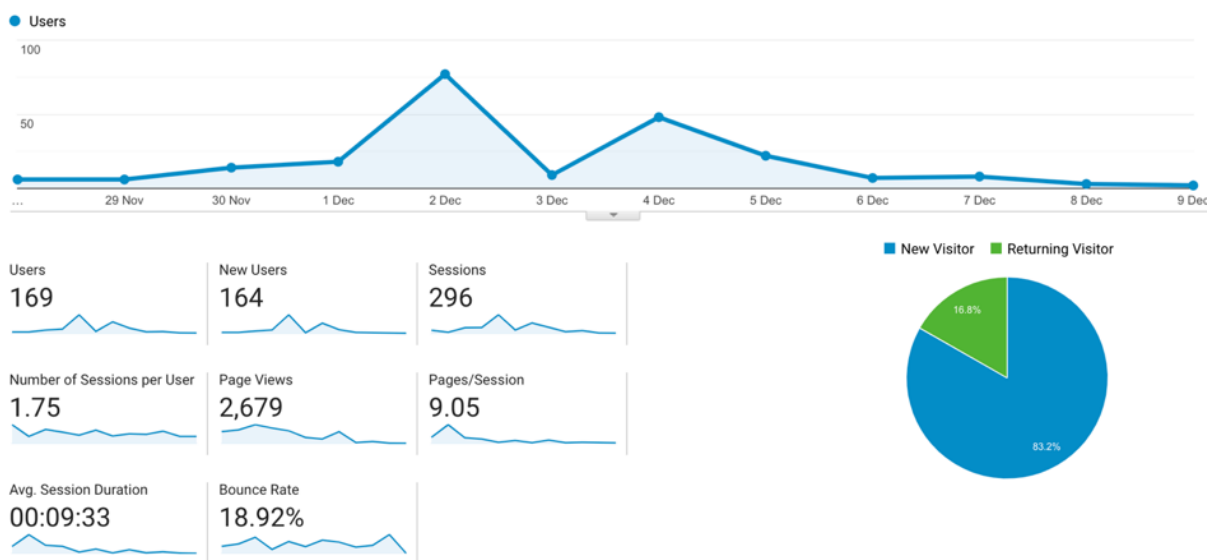

Figure19. Audience Overview

Dashboard

To monitor the contribution of the various performance indicators, I created a dashboard that provided at-a-glance views of key performance indicators (KPIs) of my website. (See Figure 20)
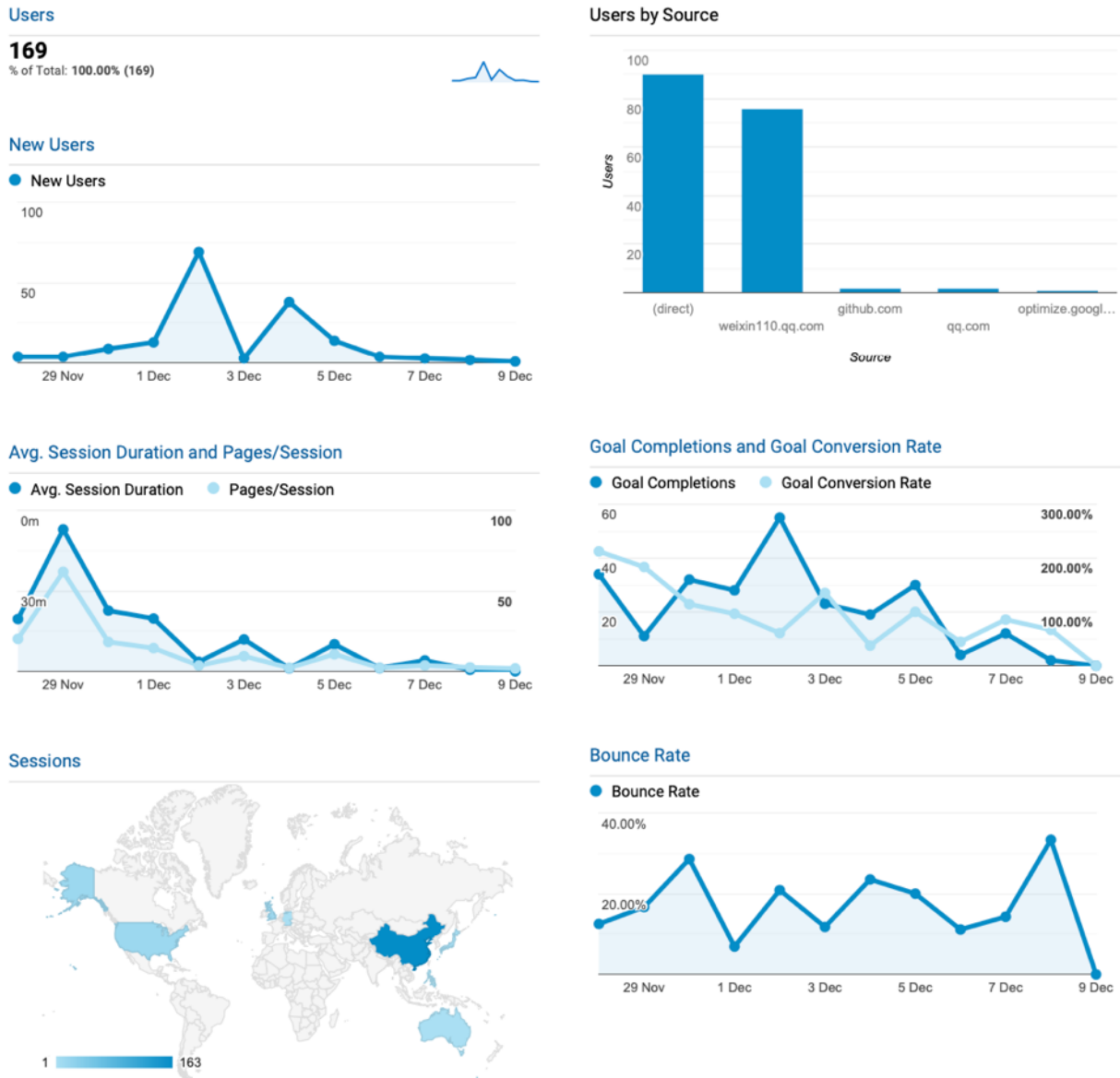
Figure20. Dashboard

There were 7 metrics I adopted when designing my customized dashboard. With regard to the user number, I promoted my website twice in my WeChat Moments separately on 2 December and 4 December, so there are two peaks in the line chart of "New Users". It's worth mentioning that there are 480 WeChat friends of me, and almost one third of them are young females that accord with the secondary target users of my website. The average session duration and pages per

session is apparently inversely proportional to the user number, as for the reason, I guess there is something to do with my think aloud test during the early operation of my website, which contributes to a longer session duration and more pages per session. Comparatively speaking, the trend of bounce rate and goal conversion rate is irregular. What's more, due to my single promotion channel, the vast majority of my users visit my website from WeChat, through either pasting the URL of my website shown in WeChat Moments into a browser or directly opening it in the platform. Generally speaking, there should be more promotion on diverse platforms so that more users will visit my website and create more analyzable data.

Conclusion

The experience of creating my own website is very valuable, from the source of data to further cleaning, filtering, aggregation, modelling, evaluation, visualization, and on-demand interaction, I make full use of what I've learned in the course. The whole working process follows the five planes of user experience elements strictly, through which I learn the true meaning of design thinking and computational thinking. However, the website is still rough and there are several problems left unsolved, such as the ambiguous copyright issue - although I have tried my best to position my website as a cultural study website for taking advantage of the "Fair Use" principle to use copyrighted images, the practical presentation of my website seems not to be very clear in reflecting such positioning. In the future, I will improve my website so as to furthermore ensure the design accurately fit for its positioning and provide more user-friendly experience for all users of my website. Also, I will keep equipping myself with required skills to prepare for a career in relative field.