

Usability Evaluation

Rusutsu Resort: <https://rusutsu.com/en/>

Caroline Berger



1) What interface did you choose to evaluate? Why did you choose to evaluate it? What are specific aspects of the interface that you hope to learn more about?

I chose to evaluate Rusutsu Resort website: <https://rusutsu.com/en/>. Personally, it's a dream of mine to ski in Japan. Imagining a future ski vacation could be an enjoyable experience for participants, unless of course they hate skiing, then the experience might be unrealistic and boring. Despite participants skiing preferences, the act of ideating about a luxury vacation could make participants happy.

I have experience browsing ski resort websites with the goal of booking lift ticket. Specifically, I have used Bromont Mountain: <https://www.bromontmontagne.com/en/> and Mount Orford <https://montorford.com/en-ca/home>. The experience of using these ski websites was frustrating, especially last year when there were restrictions on the amount of people that could enter the mountains due to COVID. The tickets were restricted and were released on a schedule. I multitasked to coordinate transportation to the mountain, contact my companions, and schedule lift ticket timing. I recall getting logged out randomly while trying to complete my purchase, a stressful experience as I rushed to secure my group's tickets.

Ski mountain websites interest me since people may prioritize going to a mountain based off the location, conditions and trails. I imagine that the user experience of the website has an impact on skiers perception of the mountain and I am curious how the user experience of the website ranks with the other criteria related to the mountain itself, or in other words, how much does the user experience of a websites impact the decision to go to a mountain and the broader user experience of the mountain itself.

Another driver for my selection is cross-cultural design. By evaluating a website of a Japanese ski mountain, I have the opportunity to identify design choices that fail to translate to an American audience. Bromont Mountain and Mount Orford are both Quebecois mountains and appeal primarily (and by law) to a French speaking audience. In that same trying experience of booking tickets, I had to complete the process in French due to the haste to get the COVID-related webpages up, and the requirement for French first in Quebec.

2) Who would be the typical users for this type of interface? Please discuss their age, computing experience, computing environment, job responsibility, and education level.

Typical users are skiers and span ages from teenagers to adults to senior citizens. The majority of skiers in 2016-17 in the USA was between the ages of 25 and 54¹, although ski demographics may vary in Japan. Typical users computing experience varies widely. Some skiers may opt to learn about the mountain and purchase tickets at the mountain itself as opposed to going through the website. The interface may be accessed from desktop, mobile or tablets. Users may or may not be employed, although based on the NSAA National Demographic Study from 2016-2017, American skiers tend to be affluent¹. Based on Rusutsu located in Japan, there is a mix between

¹ RRC Associates, "2016-17 National Demographic Study Short-Term Dynamics & Long-Term Trends Illuminate the Participant Profile" NSSA Journal, Early Winter 2017. <https://www.rrcassociates.com/wp-content/uploads/2018/08/DemographicResults.EW1617.compressed.pdf>

domestic Japanese visitors and international visitors. Travel agents and tour guides are potential users of the website and may use it when booking vacations for their clients.

3) Briefly describe some common tasks a user would perform using the interface including the task goals. Indicate which tasks you will be exploring with the evaluations and which you will not (e.g., not collecting personal health or financial information).

Users can browse, find information, and complete reservations and purchases. The user may browse photos to learn more about the mountain to support decision making on hosting an event at the mountain, such as a wedding, or to reminisce on a past visit. To support decision making on whether to ski the mountain, users can find information about the mountain including trails by difficulty, total number of trails, lifts, lift operational hours and snow fall measures. In addition to strictly ski information, information regarding opening hours, costs and location for mountain amenities of restaurants, bars, shopping, childcare and spas can inform a group that has non skiers (or visitors who value what the mountain has to offer beyond skiing) on whether to come to the mountain.

Based on the level of skiing experience of the visitor, learn to ski information including information on student-instructor ratio, cost and timing for lessons is available for users who want to learn how to ski during their visit. Following the decision to go to the mountain, the user can make reservations for their trip including booking hotels, lift tickets, ski rentals, ski lessons, and amenities in order to operationalize their plans to go to the mountain.

Browsing photos will be excluded from the task list as the scenario does not revolve around a photographed event (e.g. no wedding planning). Tasks surrounding learn to ski and additional amenities will be included, as well as general ski based tasks to reflect a scenario of a diverse group of friends planning a vacation. Tasks that require personal information and payment information will be included and mock data will be provided in task instructions. Users will be asked to stop the task before finalizing the form with dummy data. Tasks around childcare services will not be included as none of the participants I can recruit would have searching for childcare as a realistic experience. No task will instruct users to explicitly use the chatbot as there is a high likelihood of technical error on top of usability errors.

U4) Describe how tasks were chosen for inclusion in the task list. What tasks were chosen, and why were they deemed to be important tasks? How was the task list tested before it was utilized? You *must* include your task list here.

Tasks were selected based off of a realistic scenario of a group of friends going to the ski resort. The group designated someone to gather information about the ski resort, plan different activities, and book the trip. Tasks were deemed important if they were realistic to the people in their 20s I could recruit, meaning tasks around a friend who doesn't know how to ski and saving money are relevant tasks for a group of young people. Tasks would differ if they were catering to a travel agent, family or retirees. I piloted the task list with my sister. After uploading the study into TryMyUI, I went through the test myself and adjusted unclear areas. The study software collected informed consent before presenting the scenario to the user.

Scenario: You are tasked with planning a ski trip for you and your friends in Japan. You are considering Rusutsu Resort for your ski destination. Before you and your friends make the decision to come to this mountain, you'd like to find out some more information.

1. One of your friends doesn't know how to ski well and will need easy trails to ski on, find out how many easy trails there are at Rusutsu mountain.
2. After skiing each day, you plan to relax in the hot baths, called Onsens in Japanese. What are the opening days and hours of the Onsen hot baths?
3. You'd like to maximize the time you can ski on the hill, and are considering to night ski after day skiing. What are the hours for night skiing?
4. Japan is wonderful, but expensive, to see if it's possible to save a few bucks find out if it is cheaper to purchase day ticket in the spring (late March) or do a half day ticket in the winter (late December through mid-March).
5. One of your friends has an epic ski pass, based on the 2019-2020 ski season, how many days can they ski consecutively, included in their epic pass?
6. Your friends all agree that the ski trip is on. Book a hotel room for 4 people (you and your three friends) at Rusutsu Resort Hotel & Convention December 25 – December 30 stay. You don't need any ski packages, just the hotel.

Use the following dummy information:

test@test.com

Mr. Adam Smith

+1 123 345 2910

Please stop before you select Book.

7. You are considering how much currency to convert before heading to Japan, find out if the Italian restaurant in the resort accepts Visa.
8. After skiing each day, you plan to grab a drink with your friends. Find out if the main bar serves your favorite beer, Stella Artois.
9. Find out which event(s) is occurring at the mountain during your December 25 – December 30 stay.

U5) Describe the dates of the remote usability testing and how the users were recruited. How many users took part? What were their demographics (including age, gender, education, job responsibility, technical experience, or anything else relevant)? How do your recruited users differ from the typical users for the interface?

I recruited 5 users and tests took place in mid-November 2021. Through personal contacts, I recruited a mix of men and women, all in their 20s. All were at a minimum bachelor's educated and three were currently pursuing advanced degrees. Three had little to no skiing experience and two were proficient to expert.

USER	P1	P2	P3	P4	P5
AGE	23	23	26	24	24
GENDER	Woman	Man	Man	Woman	Woman
EDUCATION	B. Eng.	B. Sc.	M. Sc.	M. Sc.	M. Sc.
SKIING EXPERIENCE*	Proficient	Novice	Expert	None	Novice
FIRST LANGUAGE	English	English	French	Vietnamese	English
NATIONALITY	American	American	Canadian	Vietnamese	American
DATE	11/10/21	11/13/21	11/13/21	11/11/21	11/10/21

*Skiing Experience: None, Novice, Proficient, or Expert

Typical users of ski websites tend to have some experience skiing and for luxury mountains, some may be proficient to expert due to the high cost to ski and the size of the mountain. I would expect typical users of a Japanese ski resort to be a mix of international and Japanese visitors. Unlike my sampling, the real typical user population would have significant Japanese representation.

U6) Describe the results of the user-based tests. Address the performance of each user individually, meaning that You MUST provide the task and time performance for every user on every task in a table or two. Also, please include data from any satisfaction questions.

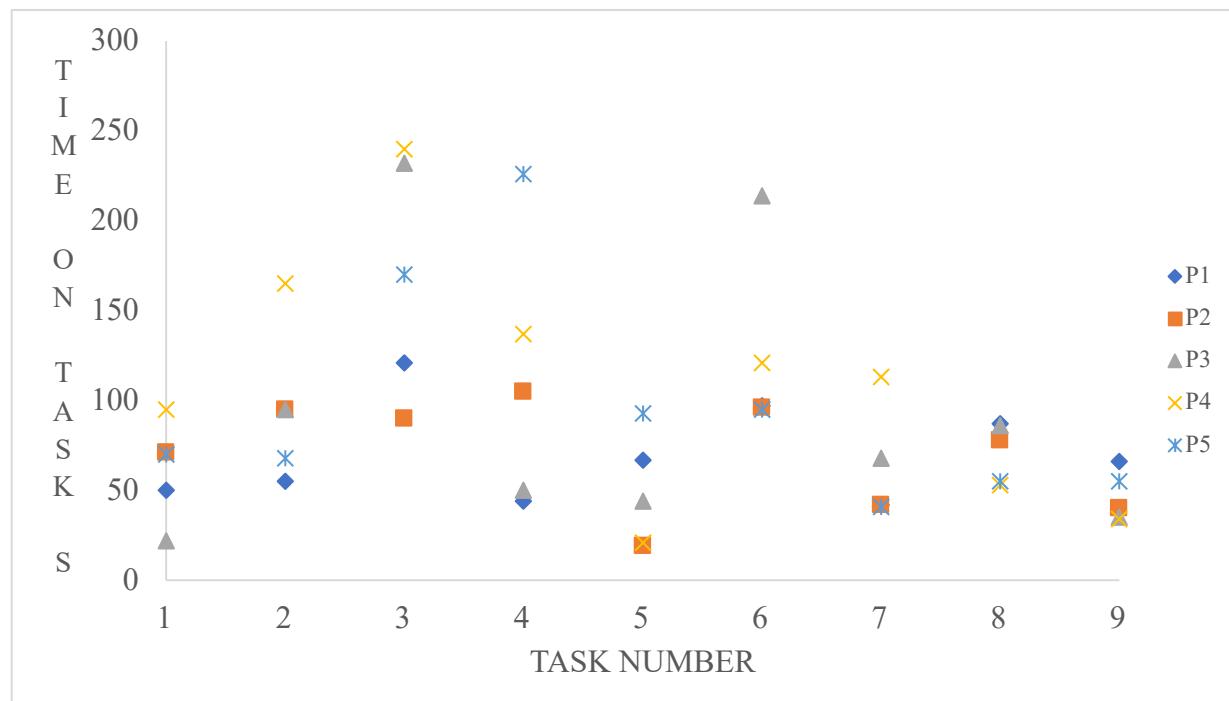
Time on task for all tasks and users varied from 19 seconds to 240 seconds (4 mins). Most tasks were completed successfully and perceived to be completed successfully by users with a few exceptions most notably in the last task [Task 4] where 4 out of 5 users incorrectly inputted the "to" date field linked to an interface usability problem. Although, users perceived to have completed the task by asserting that they had completed the task in the testing dialog. Finding the hours of night skiing [Task 3] was perceived to be the most difficult by all users. Incidentally, on average, task 3 also required the most time of all the tasks. Corresponding usability issues that caused difficulty from task 3 and task 4 are described with screen shots accompanied by suggested solutions. There was great variation in the Systems Usability Scale scores. Despite having confidence in using the technology independently, and without any additional help, users reported finding the website difficult to use and unnecessarily complex. Metrics collected during the test are depicted in table and visualized in chart form. Raw data reports are followed by task by task usability issue descriptions and recommended solutions.

Time on task*

	T1	T2	T3	T4	T5	T6	T7	T8	T9
P1	50 s	55 s	121 s	44 s	67 s	97 s	42 s	87 s	66 s
P2	71 s	95 s	90 s	105 s	19 s	96 s	42 s	78 s	40 s
P3	22 s	95 s	232 s	50 s	44 s	214 s	68 s	86 s	35 s
P4	95 s	165 s	240 s	137 s	21 s	121 s	113 s	53 s	34 s
P5	70 s	68 s	170 s	226 s	93 s	95 s	41 s	55 s	55 s

*Time on task was inspected manually due to TryMyUI problems present in other measures.

Time on task visualized



Task success outcomes highlighted

	T1	T2	T3	T4	T5	T6	T7	T8	T9
P1	RS PS	AU PS							
P2	RS PS	RS PS	AU PS	RS PS	RS PS	AU PS	RS PS	RS PS	RS PS
P3	RS PS	AU PS	RS PS	RS PS	AU PS				
P4	RS PS	RS PS	RS PS	AU PS	RS PS	AU PS	RS PS	RS PS	AU PS
P5	RS PS	AU PS							

Task success outcomes highlighted

	T1	T2	T3	T4	T5	T6	T7	T8	T9
P1	RS PS	AU PS							
P2	RS PS	RS PS	AU PS	RS PS	RS PS	AU PS	RS PS	RS PS	RS PS
P3	RS PS	AU PS	RS PS	RS PS	AU PS				
P4	RS PS	RS PS	RS PS	AU PS	RS PS	AU PS	RS PS	RS PS	AU PS
P5	RS PS	AU PS							

Task success key:

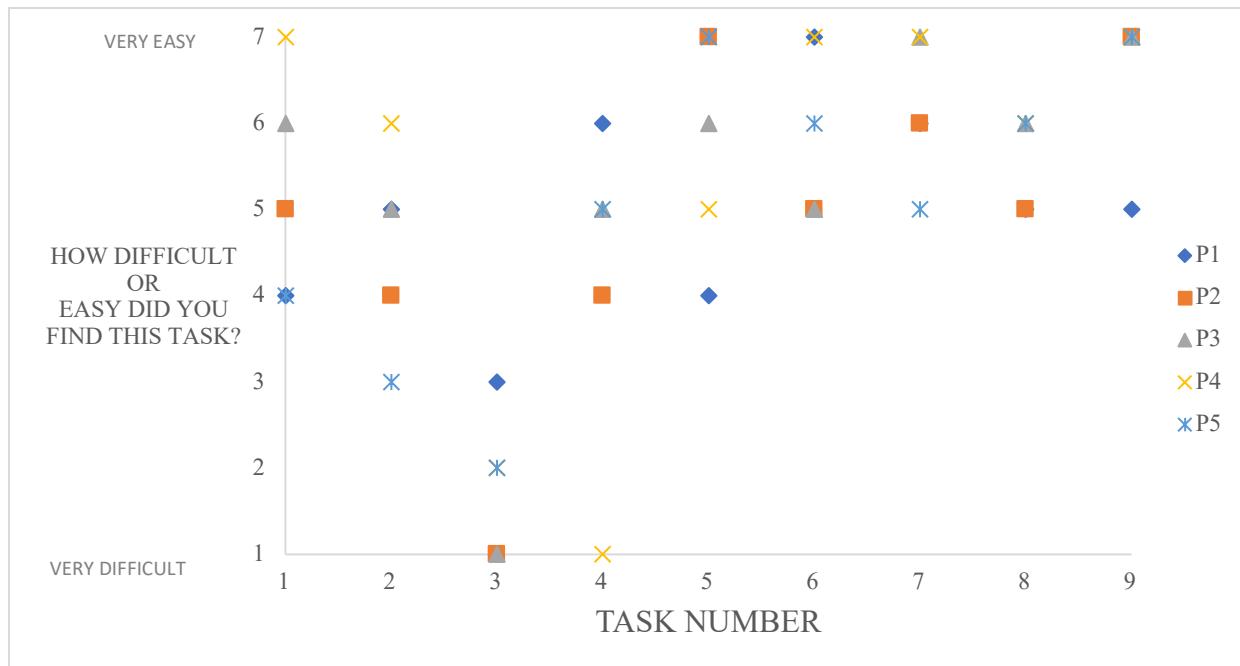
Realized success	Attempted, but unsuccessful	Not attempted	Perceived success	Perceived failure
User successfully completes the task (observably)	User attempts the task, but does not successfully complete it (observably)	User does not attempt the task (observably)	User selects “Yes” to task complete question	User selects “Yes” to task complete question
RS	AU	NA	PS	PF

Single Ease Question*

	T1	T2	T3	T4	T5	T6	T7	T8	T9
P1	4	5	3	6	4	7	6	5	5
P2**	5	4	1	4	7	5	6	5	7
P3	6	5	1	5	6	5	7	6	7
P4	7	6	2	1	5	7	7	6	7
P5	4	3	2	5	7	6	5	6	7

*Overall, how difficult or easy did you find this task? 1 = very difficult; 7=very easy

**Data was recovered for SEQ questions through manual walk through of video recordings.



Systems Usability Scale responses overview

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	SCORE
P1	3	4	2	1	4	1	5	1	5	1	55.0
P2*	N/A	N/A									
P3	4	2	5	1	4	1	5	1	5	1	92.5
P4	2	2	2	2	3	2	3	5	3	3	47.5
P5	2	3	2	2	1	4	2	4	2	3	32.5

*P2 SUS data was lost due to TryMyUI technical problem.

Systems Usability Scale responses in context

	P1	P2	P3	P4	P5
1	I think that I would like to use this system frequently 3 N/A 4			2	2
2	I found this system unnecessarily complex 4 N/A 2			2	3
3	I thought this system was easy to use 2 N/A 5			2	2
4	I think that I would need the support of a technical person to use this system 1 N/A 1			2	2
5	I found the various functions in this system were well integrated 4 N/A 4			3	1
6	I thought there was too much inconsistency in this system 1 N/A 1			2	4
7	I would imagine that most people would learn to use this system very quickly 5 N/A 5			3	2
8	I found this system very awkward to use 1 N/A 1			5	4
9	I felt very confident using this system 5 N/A 5			3	2
10	I needed to learn a lot of things before I could get going with this system 1 N/A 1			3	3
			Score		
	55.0	N/A	92.5	47.5	32.5

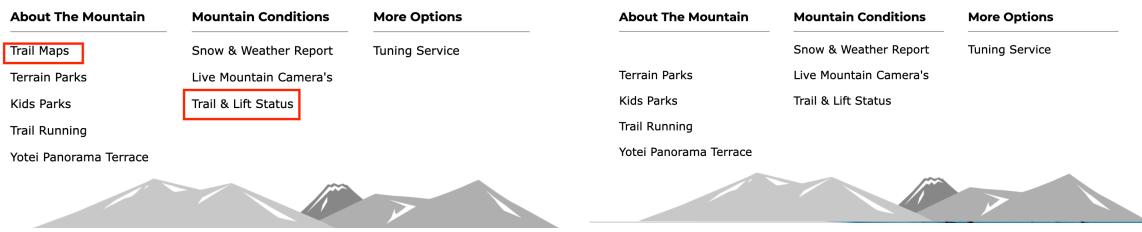
1=strongly disagree; 5=strongly agree

U7) From the results of the user-based testing, what interface problems did you discover? What suggestions do you have to improve each of these problems?

1. *One of your friends doesn't know how to ski well and will need easy trails to ski on, find out how many easy trails there are at Rusutsu mountain.*

Problem 1.1 Two menu items exist that refer to trails, confusing the user on the difference between the pages.

Solution 1.1 Remove “Trail Maps” menu item. Move information into Trail & Lift Status page.



2. *After skiing each day, you plan to relax in the hot baths, called Onsens in Japanese. What are the opening days and hours of the Onsen hot baths?*

Problem 2.1 Hours are shown on the 24 clock instead of 12 hour AM/PM, requiring the user to do mental math to get hours into a recognizable format.

Solution 2.1 If a visitor is from the US, display times on 12 hour AM/PM clock to reduce cognitive load of doing mental math on the fly.

6:00 - 9:00
14:00 - 25:00

6:00 AM - 9:00 AM
2:00 PM - 1:00 AM

3. You'd like to maximize the time you can ski on the hill, and are considering to night ski after day skiing. What are the hours for night skiing?

Problem 3.1 Night skiing information is decentralized with many mentions throughout the page unaccompanied by useful information requiring the user to scroll up and down the page.

Solution 3.1 Make night skiing information more salient and centralize information instead of having may references to night skiing without any corresponding information attached to the label to make the information more discoverable. One way to do this is by adding a tool tip with information on the hours of night skiing.

Regular season			
18/12/2021(Sat.) – 13/03/2022(Sun.)			
Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night Skiing
1 Day Ticket	6,500 JPY	5,500 JPY	3,500 JPY
Remarks			
<ul style="list-style-type: none"> - The lifts are free of charge for children ages 3 and younger. - Senior discounts are offered to visitors who are 60 and older with proof of age. - The closing time is subject to change, depending on the time of the year and other circumstances. The hours for night skiing are 16:00 to 20:00 (last ride: 19:45). Please note that night skiing will only begin once safety has been confirmed, based on the amount of snowfall on the ski trails. - The night ski operation ends on 31/03/2022 (Thu.). - For prices of tickets for 8 or more days, please contact our General Reservation Center. 			



4. Japan is wonderful, but expensive, to see if it's possible to save a few bucks find out if it is cheaper to purchase day ticket in the spring (late March) or do a half day ticket in the winter (late December through mid-March).

Problem 4.1 Comparing prices requires the user to scroll up and down the page and maintain a series of digits in their working memory. This method is prone to errors in incorrectly asserting one ticket is cheaper than the other and puts strain on working memory.

Other season

Early Season 1 : 27/11/2021(Sat.) – 10/12(Fri.)
Early Season 2 : 11/12/2021(Sat.) – 17/12(Fri.)
Spring Season : 14/03/2022(Mon.) – 03/04(Sun.)

Other season			
Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night
1 Day Ticket (Early Season 1)	4,200 JPY	3,600 JPY	2,500 JPY
1 Day Ticket (Early Season 2)	5,400 JPY	4,600 JPY	3,100 JPY
1 Day Ticket (Spring Season)	5,400 JPY	4,600 JPY	3,100 JPY
Point Ticket (1 Point)	500 JPY	400 JPY	300 JPY

Solution 4.1 Support a compare option that allows users to compare the price of different ticket options to offload working memory requirements onto the system and reduce mental math calculation errors.

Other season

Early Season 1 : 27/11/2021(Sat.) – 10/12(Fri.)
Early Season 2 : 11/12/2021(Sat.) – 17/12(Fri.)
Spring Season : 14/03/2022(Mon.) – 03/04(Sun.)

Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night
1 Day Ticket (Early Season 1)	4,200 JPY	3,600 JPY	2,500 JPY
1 Day Ticket (Early Season 2)	5,400 JPY	4,600 JPY	3,100 JPY
1 Day Ticket (Spring Season)	5,400 JPY	4,600 JPY	3,100 JPY
Point Ticket (1 Point)	500 JPY	400 JPY	300 JPY

5. One of your friends has an epic ski pass, based on the 2019-2020 ski season, how many days can they ski consecutively, included in their epic pass?

No usability issues discovered.

6. Your friends all agree that the ski trip is on. Book a hotel room for 4 people (you and your three friends) at Rusutsu Resort Hotel & Convention December 25 – December 30 stay. You don't need any ski packages, just the hotel.

Problem 6.1 Users selected options that included ski packages as a result of not being able to differentiate between results which included ski and stay package and those that did not.

Solution 6.1. Provide a filter to help narrow search results based on whether or not they include ski packages.

The image shows two side-by-side wireframe designs of a travel booking form. Both forms have sections for 'Hotel' (selected), 'Check-in' (Select), 'Check-out' (Select), 'Adults (6+)' (2), and 'Children (0-5)' (0). The right design includes an additional section labeled 'Ski and stay package' with an unchecked checkbox. Below both forms is a large red 'Search' button.

7. You are considering how much currency to convert before heading to Japan, find out if the Italian restaurant in the resort accepts Visa.

No usability issues discovered.

8. After skiing each day, you plan to grab a drink with your friends. Find out if the main bar serves your favorite beer, Stella Artois.

Problem 8.1 Users must scroll 5-10 seconds to locate the beer portion of the page which is not organized. Users scrolled up and down, missing the content because of how long the page was.

Solution 8.1. - Make text more compact so that it is visible on one screen (without scrolling) and grouped by type of beverage. Utilize typography changes and white space to group content.

The image is a screenshot of the RUSUTSU RESORT website. At the top, there's a navigation bar with links like 'Explore the Resort', 'The Mountain', 'Ticket & Passes', 'Lessons & Rentals', 'Accommodation & Offers', and a language switcher ('EN'). Below the navigation is a section titled 'BEER' in bold. This section lists several beer options:

- Al Dente Dry Hopped Italian Pilsner Talea BK - 6.5% (16oz Draft)
- Logical Conclusion IPA - Threes Brewing BK - 7% (16oz Draft)
- Imposter Czech Lager Barrier Long Island - 5% (16oz Draft)
- Sunday Beer - BK - 3.9% (12oz)
- Forst Premium Lager - Forst - Italy - 4.8% (12oz)
- Sixtus Doppelbock - Forst - Italy - 6.5% (12oz)
- Two Hearted Ale - Bell's - MI - 7% (12oz)
- Oberon Wheat - Bell's - MI - 5.8% (12oz)
- Menabrea Ambrata - Biella, Italy - 5% (12oz)
- Golden Monkey Tripel - Victory - PA - 9.5% (12oz)
- Confliction Sour - Sloop - Hudson Valley - 4.8% (12oz)

At the bottom of the page, there are sections for 'Non-Alcohol Cocktails' (900 JPY) and 'Bottled Beer' (Heineken / Corona Extra / Guinness Stout, 900 JPY).

9. Find out which event(s) is occurring at the mountain during your December 25 – December 30 stay.

Problem 9.1 After updating the calendar “to” date, the calendar “from” date is not automatically advanced to the month of “to” date field. This causes users to incorrectly select an invalid date range of 12/25-11/30. To add, there is no error message warning the user that their date range is invalid.

The screenshot shows a date range selector with two dropdown menus and a calendar grid. The first dropdown menu is set to "2021/12/25". The second dropdown menu is set to "Undecided". Below these are two calendar grids. The left grid, labeled "November 2021", shows dates from 1 to 30. The right grid, labeled "December 2021", shows dates from 1 to 31. Both grids have red boxes around them, indicating they are selected. Below the calendars, the text "on Mapping" is followed by "(Thu.) - 02/04/2022(Fri.)". A small note at the bottom states: "A mapping is cast onto the hotel's large glass screen, measuring 5m wide and 3m high. Telling the Ainu's".

Solution 9.1 Update the “from” month dynamically to encourage valid date selection.

The screenshot shows a date range selector with three dropdown menus and a calendar grid. The first dropdown menu is set to "2021/12/25". The second dropdown menu is set to "Undecided". The third dropdown menu is set to "December". Below these is a single calendar grid for December 2021, showing dates from 1 to 31. The word "December" is highlighted with a red box. Below the calendar, the text "on Mapping" is followed by "(Thu.) - 02/04/2022(Fri.)". A small note at the bottom states: "A mapping is cast onto the hotel's large glass screen, measuring 5m wide and 3m high. Telling the Ainu's".

E8) Which set of heuristics did you use for the heuristic evaluation, and why did you choose those?

Norman Nielsen's 10 Usability Heuristics for User Interface Design. They are well known and used in many different organizations. I'm familiar with the set and have used the set at work, and have been referred to NNG webpage on heuristics by my colleagues and past professors. In the heuristic evaluations I've performed in the past, I've found NNG's set of heuristics comprehensive and understandable by a diverse project team from varying subject matter expertise. They work well for websites accessed on desktop specifically. The heuristics are readily understood by decision makers and project leaders.

E9) From the results of the expert review, what interface problems did you discover? What suggestions do you have to improve each of these problems? Be specific as to which heuristic helped you discover the needed improvement.

1. Visibility into system status

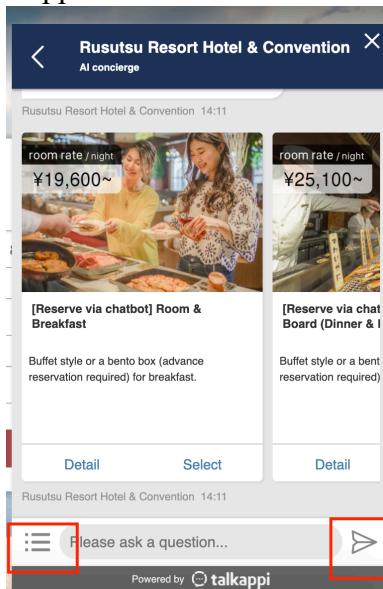
Problem 1.1 Difficult to understand map icon on menu to underlying action and/or information.



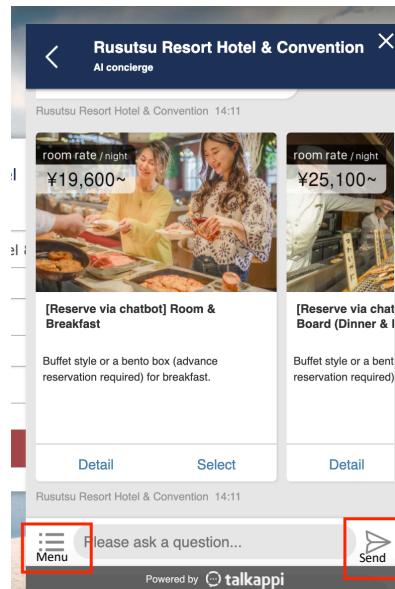
Solution 1.1 Replace “—” with meaningful icon to increase visibility into system status. For improved accessibility, add text underneath.



Problem 1.2 Unlabeled menu and send icons in chatbot are difficult to recognize the mapped action and/or information.

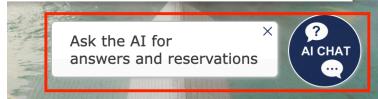


Solution 1.2 Provide text labels for menu and send icon to increase visibility into system status.

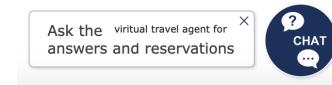


2. Match between system and the real world

Problem 2.1 Use of label/name “AI” for the chatbot differs from a real world agent and is confusing as to how AI is leveraged in the chat.



Solution 2.1 Use virtual travel agent as opposed to AI to relate more to the user's real world.



Problem 2.2 Dates are displayed Day/Month/Year which doesn't follow the American standard date format.

Hotel
Hotel + Flight

Hotel

Rusutsu Resort Hotel & Convention

Check-in
Check-out

08/11/2021
11/11/2021

Adults (6+)
Children (0-5)

2
0

Search

Solution 2.2 Consider displaying dates Month/Day/Year for US website visitors to better match standards that they are accustomed to and to reduce scheduling errors from occurring. Continue using Day/Month/Year for visitors from the rest of the world.

Hotel
Hotel + Flight

Hotel

Rusutsu Resort Hotel & Convention

Check-in
Check-out

11/08/2021
11/11/2021

Adults (6+)
Children (0-5)

2
0

Search

Problem 2.3 Currency is displayed only in Japanese Yen with no easy way to convert currencies to website user's local currency.

RUSUTSU RESORT
HOKKAIDO JAPAN
Explore the Resort
The Mountain
Ticket & Passes
Lessons & Rentals
Accommodation & Offers
EN ▾
...
Re

18/12/2021(Sat.) – 13/03/2022(Sun.)

	Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night
1 Day Ticket	6,500 JPY	5,500 JPY	3,500 JPY	<input type="radio"/>
1 Day Ticket (online purchase)	6,200 JPY	5,200 JPY	3,200 JPY	<input type="radio"/>
2 Days Ticket	12,400 JPY	10,400 JPY	6,400 JPY	<input type="radio"/>
3 Days Ticket	18,600 JPY	15,600 JPY	9,600 JPY	<input type="radio"/>
4 Days Ticket	24,800 JPY	20,800 JPY	12,800 JPY	<input type="radio"/>
5 Days Ticket	31,000 JPY	26,000 JPY	16,000 JPY	<input type="radio"/>
6 Days Ticket	37,200 JPY	31,200 JPY	19,200 JPY	<input type="radio"/>

Solution 2.3 Create a toggle to display prices in user's local currency or JPY.

RUSUTSU RESORT
HOKKAIDO JAPAN
Explore the Resort
The Mountain
Ticket & Passes
Lessons & Rentals
Accommodation & Offers
EN ▾
...
Re

18/12/2021(Sat.) – 13/03/2022(Sun.)

	Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night
1 Day Ticket	6,500 JPY	5,500 JPY	3,500 JPY	<input type="radio"/>
1 Day Ticket (online purchase)	6,200 JPY	5,200 JPY	3,200 JPY	<input type="radio"/>
2 Days Ticket	12,400 JPY	10,400 JPY	6,400 JPY	<input type="radio"/>
3 Days Ticket	18,600 JPY	15,600 JPY	9,600 JPY	<input type="radio"/>
4 Days Ticket	24,800 JPY	20,800 JPY	12,800 JPY	<input type="radio"/>
5 Days Ticket	31,000 JPY	26,000 JPY	16,000 JPY	<input type="radio"/>
6 Days Ticket	37,200 JPY	31,200 JPY	19,200 JPY	<input type="radio"/>

USD
JPY

3. User control and freedom

Problem 3.1 The adult drop down is maximum 3 and the child drop down is maximum 2 reducing the freedom of the user to complete their reservation information.

The screenshot shows a search interface for RUSUTSU RESORT. At the top, there are two tabs: "Hotel" and "Hotel + Flight". Below the tabs, there are fields for "Hotel" (set to "The Westin Rusutsu Resort") and "Origin" (a dropdown menu). Under "Departing Date" and "Returning Date", there are "Select" buttons with calendar icons. For "Check-in" and "Check-out", there are "Select" buttons with calendar icons. In the "Cabin Class" section, there are dropdown menus for "Adults (18+)" (set to "Economy"), "Children (0-17)" (set to "2"), and "Currency" (set to "USD"). Below these, there are dropdown menus for "Child 1 Age" and "Child 2 Age", both set to "Age". There is also a dropdown menu for "Language" (set to "English") and another for "Currency" (set to "USD"). A large red box highlights the "Night Skiing" column, which is a separate column from the others and contains a radio button.

	Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night Skiing
1 Day Ticket	6,500 JPY	5,500 JPY	3,500 JPY	<input type="radio"/>
1 Day Ticket (online purchase)	6,200 JPY	5,200 JPY	3,200 JPY	<input type="radio"/>
2 Days Ticket	12,400 JPY	10,400 JPY	6,400 JPY	<input type="radio"/>
3 Days Ticket	18,600 JPY	15,600 JPY	9,600 JPY	<input type="radio"/>
4 Days Ticket	24,800 JPY	20,800 JPY	12,800 JPY	<input type="radio"/>
5 Days Ticket	31,000 JPY	26,000 JPY	16,000 JPY	<input type="radio"/>
6 Days Ticket	37,200 JPY	31,200 JPY	19,200 JPY	<input type="radio"/>
7 Days Ticket	43,400 JPY	36,400 JPY	22,400 JPY	<input type="radio"/>

Solution 3.1 Support free population of fields through free text field completion as opposed to dropdown.

This screenshot shows the same search interface as the first one, but with changes to the "Cabin Class" section. Instead of dropdown menus, there are free text input fields. The "Night Skiing" column is still highlighted with a red box and contains a radio button.

	Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night Skiing
1 Day Ticket	6,500 JPY	5,500 JPY	3,500 JPY	<input type="radio"/>
1 Day Ticket (online purchase)	6,200 JPY	5,200 JPY	3,200 JPY	<input type="radio"/>
2 Days Ticket	12,400 JPY	10,400 JPY	6,400 JPY	<input type="radio"/>
3 Days Ticket	18,600 JPY	15,600 JPY	9,600 JPY	<input type="radio"/>
4 Days Ticket	24,800 JPY	20,800 JPY	12,800 JPY	<input type="radio"/>
5 Days Ticket	31,000 JPY	26,000 JPY	16,000 JPY	<input type="radio"/>
6 Days Ticket	37,200 JPY	31,200 JPY	19,200 JPY	<input type="radio"/>
7 Days Ticket	43,400 JPY	36,400 JPY	22,400 JPY	<input type="radio"/>

4. Consistency and standards

Problem 4.1 Night skiing column is different from the other columns and the radio button is not functional

The screenshot shows a table of ticket prices for RUSUTSU RESORT. The columns are labeled "Adult (Ages 13-59)", "Senior (Ages 60+)", "Child (Ages 4-12)", and "Night Skiing". The "Night Skiing" column is highlighted with a red border. Each row represents a different ticket type, such as "1 Day Ticket" or "7 Days Ticket", with its corresponding price in JPY.

	Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night Skiing
1 Day Ticket	6,500 JPY	5,500 JPY	3,500 JPY	<input type="radio"/>
1 Day Ticket (online purchase)	6,200 JPY	5,200 JPY	3,200 JPY	<input type="radio"/>
2 Days Ticket	12,400 JPY	10,400 JPY	6,400 JPY	<input type="radio"/>
3 Days Ticket	18,600 JPY	15,600 JPY	9,600 JPY	<input type="radio"/>
4 Days Ticket	24,800 JPY	20,800 JPY	12,800 JPY	<input type="radio"/>
5 Days Ticket	31,000 JPY	26,000 JPY	16,000 JPY	<input type="radio"/>
6 Days Ticket	37,200 JPY	31,200 JPY	19,200 JPY	<input type="radio"/>
7 Days Ticket	43,400 JPY	36,400 JPY	22,400 JPY	<input type="radio"/>

Solution 3.1 Support free population of fields through free text field completion as opposed to dropdown.

This screenshot shows the same ticket price table as the previous one, but with changes to the "Night Skiing" column. Instead of a radio button, there is a free text input field where users can enter the price. The "Night Skiing" column is highlighted with a red border.

	Adult (Ages 13-59)	Senior (Ages 60+)	Child (Ages 4-12)	Night Skiing
1 Day Ticket	6,500 JPY	5,500 JPY	3,500 JPY	3,500 JPY
1 Day Ticket (online purchase)	6,200 JPY	5,200 JPY	3,200 JPY	3,500 JPY
2 Days Ticket	12,400 JPY	10,400 JPY	6,400 JPY	6,400 JPY
3 Days Ticket	18,600 JPY	15,600 JPY	9,600 JPY	9,600 JPY
4 Days Ticket	24,800 JPY	20,800 JPY	12,800 JPY	12,800 JPY
5 Days Ticket	31,000 JPY	26,000 JPY	16,000 JPY	16,000 JPY
6 Days Ticket	37,200 JPY	31,200 JPY	19,200 JPY	19,200 JPY
7 Days Ticket	43,400 JPY	36,400 JPY	22,400 JPY	22,400 JPY

7. Flexibility and efficiency of use

Problem 7.1 Long scroll to reach different segments of information making it time consuming to find important information.

Solution 7.1 Create a side navigation bar to quickly navigate to relevant information and find subsections of page easily.

10) Compare and contrast what you found in the user-based testing and the heuristic review. How did your findings differ? Did any findings conflict with one another?

Findings from the user-based testing centered around task-based interactions. The heuristic review uncovered inconsistencies in design and issues from a more static perspective as the review didn't include specific user goals or tasks. During user-based testing, I noticed that users did not take the most direct route or efficient path to their desired page which I hadn't uncovered in the heuristic evaluation.

The level of prior ski experience impacted the user's ability to understand the terms present on the webpage. Since I ski, it was easy for me to understand ski-related terms during the heuristic evaluation. I hadn't realized how my domain knowledge would create blind spots for me while evaluating the interface independently. The first language of participants also impacted their understanding of the interface. I noticed that the French language speaker selected the "Après ski" menu item to find information about the bar menu. Users who are unfamiliar with the term "Après ski" might not know to look in this portion of the website.

No findings conflicted with each other. Solution 7.1 from the heuristic evaluation of having additional side menu pane would have helped many users find their location on a webpage and navigate more efficiently resulting in less time on task and higher scores in ease of use in the user-based testing. Similarly, problems around currency and time conversions occurred during both the heuristic evaluation and user-based test, satisfying my stated goal for examining international design. Unfortunately due to data loss on TryMyUI, my goal was not met on how web experience impacts intention to go to the mountain. Responses to whether or not they were likely to book a vacation based on their experiences on the website was not captured.

11) Of the various potential improvements that you discovered in the user-based testing and the heuristic evaluation, which would you prioritize as the top 3 interface improvements needed, and why?

- 1 Problem 9.1 from user-based testing of the calendar "to" date not updating because it created task failure for 4 out of 5 participants. Task failure is an indicator of high severity of a usability problem.
- 2 Problem 7.1 from heuristic evaluation separating out information into sections because it came up in both evaluations. Throughout the tasks, users spent a lot of time scrolling through long pages of text and missing information and navigating away, foraging through other pages and coming back. They even resorted to using the "Find" command to find information. Frequency and workarounds are an indicator of high severity of a usability problem.
- 3 Problem 2.2 and 2.3 from the heuristic evaluation and problem 2.1 from the user-based assessment around time and currency conventions since this occurred frequently and throughout the website. Frequency is an indicator of high severity with the added bonus of low effort required to implement a fix.

12) What do you feel that you learned from doing both the user-based testing and the heuristic evaluation?

The user testing tool that is selected has a large impact on expressed frustrations from the users during the task and the time it takes to analyze data. I would prefer tools that didn't require the user to install additional software as installations can be disguised as security threats and the installation process is long and cumbersome. The tool interfered with the interface and made the time on task unreliable as time was spent moving the dialog to the side. Lags in the videorecording made it difficult to track the interface's responses to user interactions. Another confounding variable to the time on task measurement was the difference between a mouse and trackpad and whether or not the participant utilized concurrent think-aloud protocol (they were not instructed to do so, but TryMyUI software had some language around announcing completion of tasks).

The SUS questionnaire varied participant to participant and seemed to conflict with other measures and data collected during the test making me doubt the appropriateness of such an assessment given the small test sample. Perhaps with a larger user group or longer study, it would be easier to analyze trends to assess the appropriateness of applying SUS.

Both forms of assessment complement each other. One form of evaluation misses issues uncovered in the other form. To catch obvious usability issues, it's important to perform heuristic evaluations before user-based testing, but if you only have time or budget to do one, I would do recommend performing only user-based testing. I found that frustrations encountered during user-based testing were an indicator of the issues that real users face while using the website.

I perform both types of evaluations at my job and I found this assignment a good exercise in getting back to basics and performing assessments in best case scenario type settings. In my real-world experience, it's common for users cancel last minute, that the interface require extensive domain expertise that heuristic evaluations are only surface deep, and for analysis to be rushed.