



**Arizona State  
University**

# **Team Boacash Project Report**

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# 1. Introduction

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## 1.1. Purpose

Exotic Animals for Sale ([www.exoticanimalsforsale.net](http://www.exoticanimalsforsale.net)) is a craigslist like website for purchasing and selling exotic animals and all sorts of equipment related to them. The website has fairly decent traffic with new animals being added everyday. However, there are many departments in which the website is severely lacking; these include the user registration, posting new content and searching or browsing for animals to purchase. We decided to focus on the searching and browsing portion of the website.

## 1.2. Tasks Identified

The tasks that we decided to focus on were the following:

1. Better text matching in search bar.
2. Cleaner and sleeker search result interface.
3. Ability to sort results by date, price and distance.
4. Ability to filter results by category and distance.

## 1.3. Assumptions

It is assumed that the user is familiar with computers and the internet and has completed an online purchase recently.

# 2. Analysis

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## 2.1. Personas



### **Lance the Software Developer**

**Occupation:** Software Developer

**Family Status:** Single

**Tasks/Goals:** Lance is a recent college graduate who wants to get his first pet. He is interested in exotic animals and has decided that he wants to find the cheapest lemur within 100 miles.

**Environment:** Lance is an entry level software developer at Dominos. He has a strong work ethic and should have no problems moving up in the company. He currently lives in his college apartment and is looking to move to a different location.

**Quotation:** "I have a lot of bugs in my house. I am pretty sure that lemurs eat bugs, so they would be handy to have around too!"



### **Joe the Enlightened**

**Occupation:** Talkshow Host and MMA Commentator

**Family Status:** Married, 3 children

**Tasks/Goals:** Joe is fascinated with apes. He regularly talks about their strength in his talkshows and wants to see if he is able to teach an ape modern bodybuilding techniques. He does not care about price or location, and he wants to find the highest quality ape.

**Environment:** Joe is well known in the MMA community, and is now most known for The Joe Rogan Experience. He currently lives in California, but would consider getting a location in a state where owning apes is legal.

**Quotation:** "If you think about it gorillas don't know any bodybuilding techniques so we've probably never seen one at full strength."



### **Janet the Conservationist**

**Occupation:** Zookeeper at Phoenix Zoo

**Family Status:** Single

**Tasks/Goals:** Janet loves exotic birds and wants to see if there are ones in her price range. She does not want to spend more than \$2000 on a bird, and doesn't want to travel more than 300 miles away.

**Environment:** Janet owns a house in Phoenix and has enough space for a bird. She understands the proper care for exotic birds and wants to appreciate one in her own home when she is not in the zoo. She plans to create a habitat in her home for this bird.

**Quotation:** "I like birds a lot. That's why I work at the zoo. I've been looking for a good website to find and view exotic birds."

## **2.2. Task Analysis Tools**

For tasks analysis on [exoticanimalsforsale.net](http://exoticanimalsforsale.net) we used heuristic evaluation, cognitive walkthrough as well as visiting other similar websites to see what sort of search features that were implemented. On the heuristic evaluation the website got a 46 out of a 100 and we found the website to be lacking most features. Even the features that were implemented were not implemented with modern standards in mind.

The website did little to no error checking, also user input was not validated when submitting an ad to be posted on the website. The user also did not receive any feedback for any action on the website, for instance when submitting a form. The website also did not have any visual appeal and often times text was difficult to click or read especially on devices with higher resolution. The website

also had an extremely poor search feature, there was also no option to sort the results or filter by anything besides state.

Using the 80/20 principle, we decided to focus on fixing the biggest thing that the users would visit this website for. We decided to give an overhaul to the search page, improve the visual appearance, show results without reloading the page, have modern sorting/filtering features and show user feedback for any interaction with the search form.

## 2.3. Task #1

### 2.3.1.Task Detail #1

For the first task find an arbitrary exotic animal (wolf, badger etc) by typing in the name in the search field and then pick the cheapest animal from the results.

### 2.3.2.Task #1 Analysis

The website has very strict matching and it does not produce search results on partial word matches and on spelling errors. The results are also only in the order that the ad was posted and there is no way to sort the results in any other order.

### 2.3.3.Task #1 Discussion

Most comparable similar websites like Craigslist, eBay or any other e-commerce website let the user sort the results in some meaningful way. These websites also have a good fuzzy matching algorithm because the user typically assumes that all relevant results will show up if they exist.

## 3. Prototype and Design

### 3.1. Overview of Prototype and Design Features

We overhauled the search page and combined multiple pages from the old website into one. Functionality wise, we added a fuzzy matched string search and filtered by category and distance. We also added the ability to sort search results by date, price ascending, price descending and distance. We also redesigned the search and filter feature to work without reloading the page however, in order to mimic real world performance we ran our new website from ASU servers instead of from our local computer.

Design wise, we made the page responsive so it is easy to use on all devices. We fixed font sizes and color according to modern web standards (WCAG 2.1). Since our redesigned search functionality worked without reloading the page we added an animation to the search results to indicate to the user that the results had been updated.

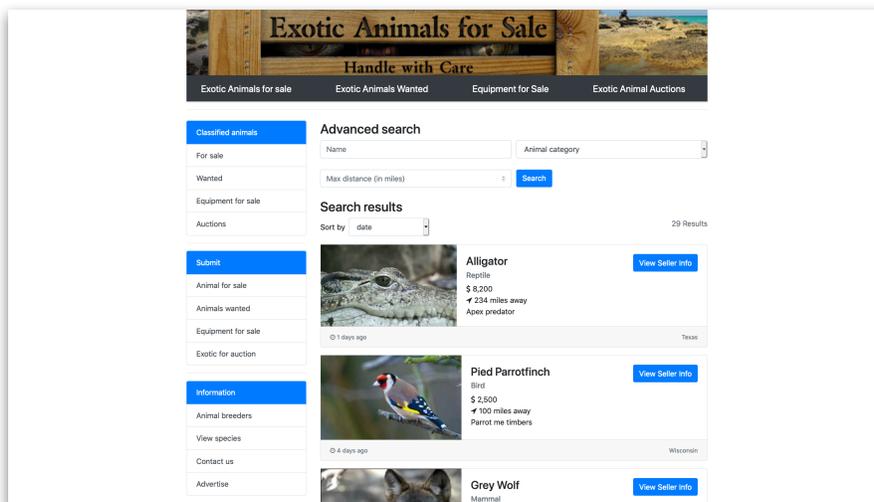


Fig 1. Screenshot of the redesign which shows the new search functionalities

## 3.2. Task #1

### 3.2.1.Task #1 Design

In order to provide the users with modern and efficient search features, we combined multiple pages on the original website into a single page along with some additional functionalities. On the original website, there was a separate page to browse only by category and date and none other. We added the options to filter and sort in multiple different ways as described in the redesign above. We expect these features to significantly cut down times to find a specific result if it exists on the website. For example finding a specific species or finding something within your state or a specific radius.

### 3.2.2.Task #1 Design Justifications

Our primary justification for adding a better search functionality was the fact that most comparable sites have these features (See Appendix 6.1, 6.2). People also expect these features to exist in any modern website so when we initially tested the website people actively looked for these features but failed to find them since they did not exist. Since the main function of the website is to list animals for sale we applied the 80/20 rule to improve the browsing functionality. We also used the alignment and readability principles to improve the general aesthetics of the page.

### 3.2.3.Task #1 Prototype

The original version of the website does not have any sorting or filtering features which means lets say a user is wondering what the cheapest or most expensive animal is on the website then they would have to go through every single listing to find the answer. Similarly, there is no way to combine multiple options like searching only within a specific distance or within a specific category as shown in the figure.

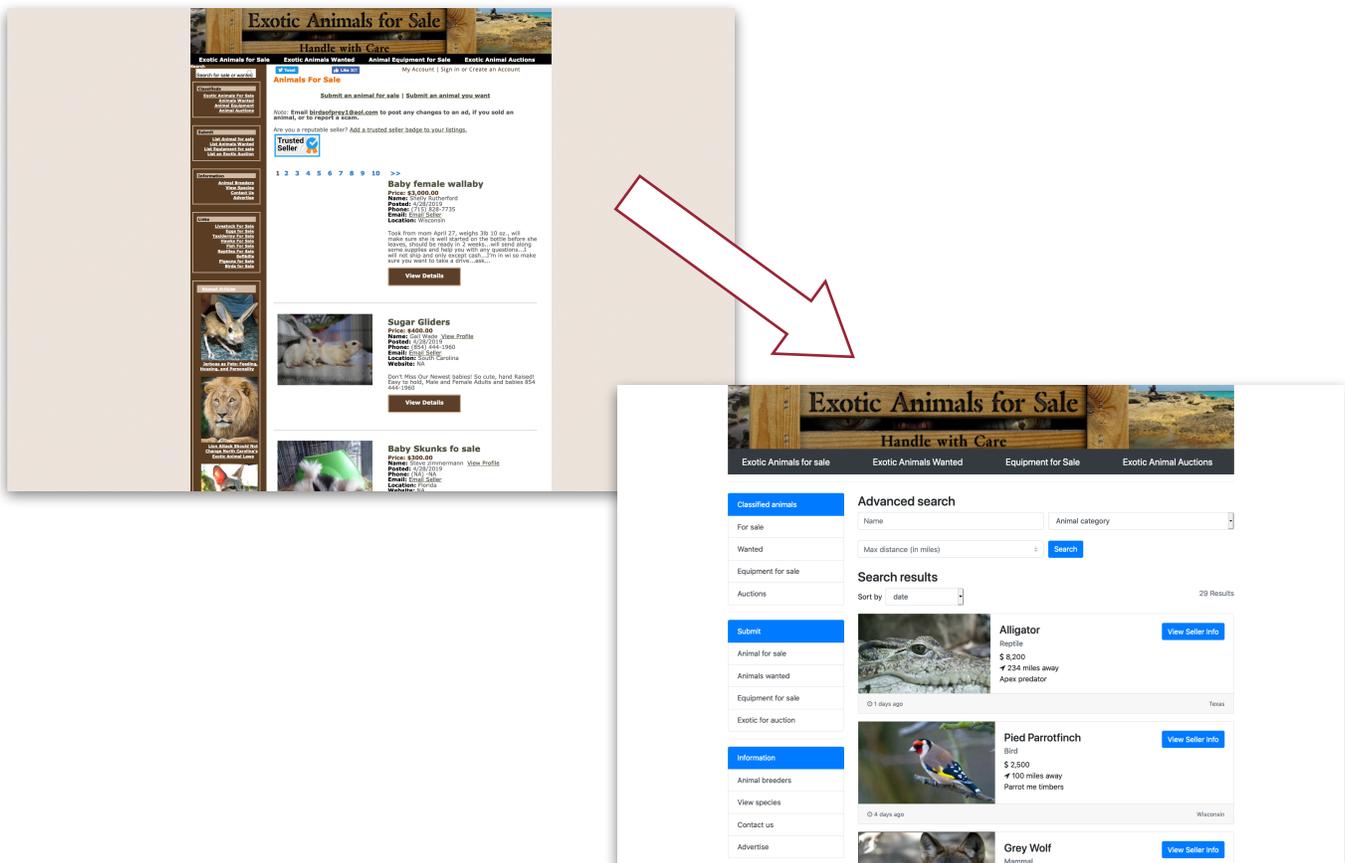


Fig 2. Original website on top left and new website on bottom right.

### 3.2.4.Task #1 Prototype Rational

Since this prototype adds to the functionality rather than simply changing it, it was an easy decision to pick this prototype because it is objectively better by any standard. It adds more functionality while making the design less clutter which is an improvement in any sense. The prototype also meets our goal of simplifying the search process by cutting down search time. In terms of time, in some cases such as finding the closest or cheapest/most expensive it cuts down the time from linear to constant.

## 4. A/B Testing

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### 4.1. Participants

We recruited 16 total participants for testing, 8 for the original website and 8 of the redesign. We sent out an email in Life Sciences building to recruit participants and got majority of the people from there and the rest were our roommates. The participants included graduate students, post docs, staff and faculty members at ASU.

### 4.2. Scenarios

The participants were given a single scenario that could take up to 15-20 minutes if done correctly. The scenario was to find the contact information of the person selling and the task ended as soon as the person wrote down the information (See Appendix 6.4). The participants did not fill any pre session questionnaire and were verbally instructed on the task they had to accomplish. They were verbally told the scenario and were also told that they could give up at any point if they found the task to be frustrating. All participants completed a post session paper questionnaire.

### 4.3. Equipment

The participants completed the session in a normal office environment on a dell desktop computer with generic keyboard and mouse. The monitor was 22" with 1920x1080 and the computer was running windows 10 and the browser was chrome. We recorded all the desktop on all session using the [Screen Recorder](#) plugin.

### 4.4. Subjective Metrics

The participants were asked to fill out a post session questionnaire (See Appendix 6.5) which included questions relating to satisfaction, ease of use and likelihood to use or recommend the website. The answers were based on a 5 point Likert scale.

### 4.5. Quantitative Metrics

For our task we tracked two quantitative metrics. Our first metric is Time on Task which was the main metric we were focused on improving. Theoretically, if our redesign is used as intended then this would be a constant time whereas on the original website it would be linear to the number of listings on the website. Our second metric is Successful Task Completion and we choose this metric to test our hypothesis that it is extremely easy to get the incorrect answer on the original website.

## 4.6. Test results

Participant	Website	Success	Time	SUS	Rating
Mathew	Old	No	7:54	40	0
Lenora	Old	No	3:59	20	0
Smita	Old	No	6:21	25	0
Rebecca	Old	No	3:04	12.5	0
Mia	Old	No	8:30	30	2
Dan	Old	No	7:42	32.5	2
Angie	Old	Yes	14:17	22.5	1
Kate	Old	Yes	15:48	10	0
Jacob	New	Yes	4:28	100	8
Miguel	New	Yes	3:17	82.5	5
Jennifer	New	Yes	0:41	85	0
Ken	New	Yes	5:13	92.5	5
Suhail	New	Yes	0:23	95	5
Nick	New	Yes	0:25	72.5	9
Omar	New	Yes	0:53	90	8
Connor	New	Yes	0:14	85	9

### 4.6.1. Chi-Squared Test on Success (Pass / Fail)

	Pass	Fail	Marginal Row Totals
New	7	1	8
Old	2	6	8
Marginal Column Totals	9	7	16 (Grand Total)

The chi-square statistic is 6.3492. The  $p$ -value is .011743. This result is significant at  $p < .05$ .  
 The chi-square statistic with Yates correction is 4.0635. The  $p$ -value is .04382. Significant at  $p < .05$ .

Given that 7 passes and 1 failure is shown to be statistically significant for website task successes, it is a reasonable assumption that our observed 8 passes and 0 failures will also be statistically significant. We have to make this assumption because it is not possible to do a Chi-squared test with our 100% success rate for one of the categories. If anything, this is a clear demonstration of the validity of our alteration of the website.

### 4.6.2. T Test on Time to Complete the Task

#### Treatment 1 (X)

474, 239, 381,  
184, 510, 462,  
857, 948

#### Diff(X - M)

-32.88  
-267.88  
-125.88  
-322.88  
3.12  
-44.88  
350.12  
441.12

M: 506.88

#### Sq. Diff(X - M)<sup>2</sup>

1080.77  
71757.02  
15844.52  
104248.27  
9.77  
2013.77  
122587.52  
194591.27

SS: 512132.88

#### Difference Scores Calculations

##### Treatment 1

$N_1: 8$   
 $df_1 = N - 1 = 8 - 1 = 7$   
 $M_1: 506.88$   
 $SS_1: 512132.88$   
 $s^2_1 = SS_1 / (N - 1) = 512132.88 / (8 - 1) = 73161.84$

##### Treatment 2

$N_2: 8$   
 $df_2 = N - 1 = 8 - 1 = 7$   
 $M_2: 116.75$   
 $SS_2: 105397.5$   
 $s^2_2 = SS_2 / (N - 1) = 105397.5 / (8 - 1) = 15056.79$

#### Treatment 2 (X)

268, 197, 41, 313,  
23, 25, 53, 14

#### Diff(X - M)

151.25  
80.25  
-75.75  
196.25  
-93.75  
-91.75  
-63.75  
-102.75

M: 116.75

#### Sq. Diff(X - M)<sup>2</sup>

22876.56  
6440.06  
5738.06  
38514.06  
8789.06  
8418.06  
4064.06  
10557.56

SS: 105397.50

#### T-value Calculation

$s^2_p = ((df_1 / (df_1 + df_2)) * s^2_1) + ((df_2 / (df_1 + df_2)) * s^2_2)$   
 $s^2_p = ((7 / 14) * 73161.84) + ((7 / 14) * 15056.79) = 44109.31$

$s^2_{M_1} = s^2_p / N_1 = 44109.31 / 8 = 5513.66$

$s^2_{M_2} = s^2_p / N_2 = 44109.31 / 8 = 5513.66$

$t = (M_1 - M_2) / \sqrt{(s^2_{M_1} + s^2_{M_2})} = 390.12 / \sqrt{11027.33} = 3.72$

The  $t$ -value is 3.71508. The  $p$ -value is .001154. The result is significant at  $p < .05$ .

From the above we can see the  $t$  value is 3.17, we also yield a  $p$  value under our alpha, showing proof of statistical significance between the two groups. This analysis shows that it took less time to complete the task on the newer website prototype.

### 4.6.3. T Test on SUS of the Website

Treatment 1 (X)

40
20
25
12.5
30
32.5
22.5
10

Diff(X - M)

15.94
-4.06
0.94
-11.56
5.94
8.44
-1.56
-14.06
M: 24.06

Sq. Diff(X - M)<sup>2</sup>

254.00
16.50
0.88
133.69
35.25
71.19
2.44
197.75
SS: 711.72

#### Difference Scores Calculations

Treatment 1

$$N_1: 8$$

$$df_1 = N - 1 = 8 - 1 = 7$$

$$M_1: 24.06$$

$$SS_1: 711.72$$

$$s^2_1 = SS_1 / (N - 1) = 711.72 / (8 - 1) = 101.67$$

Treatment 2 (X)

100
82.5
85
92.5
95
72.5
90
85

Diff(X - M)

12.19
-5.31
-2.81
4.69
7.19
-15.31
2.19
-2.81
M: 87.81

Sq. Diff(X - M)<sup>2</sup>

148.54
28.22
7.91
21.97
51.66
234.47
4.79
7.91
SS: 505.47

Treatment 2

$$N_2: 8$$

$$df_2 = N - 1 = 8 - 1 = 7$$

$$M_2: 87.81$$

$$SS_2: 505.47$$

$$s^2_2 = SS_2 / (N - 1) = 505.47 / (8 - 1) = 72.21$$

#### T-value Calculation

$$s^2_p = ((df_1 / (df_1 + df_2)) * s^2_1) + ((df_2 / (df_2 + df_1))$$

$$* s^2_2) = ((7 / 14) * 101.67) + ((7 / 14) * 72.21) =$$

$$86.94$$

$$s^2_{M_1} = s^2_p / N_1 = 86.94 / 8 = 10.87$$

$$s^2_{M_2} = s^2_p / N_2 = 86.94 / 8 = 10.87$$

$$t = (M_1 - M_2) / \sqrt{(s^2_{M_1} + s^2_{M_2})} = -63.75 / \sqrt{21.74} = -13.67$$

The t-value is -13.674. The p-value is < .00001. The result is significant at  $p < .05$ .

From the above we can see the t value is -13.674, we also yield a p value under our alpha, showing proof of statistical significance between the two groups. This analysis shows there was a positive statistically significant difference for our new website prototype's SUS.

#### 4.6.4. T Test on Rating to Likely use the Website Again

Treatment 1 (X)	Diff(X - M)	Sq. Diff(X - M) <sup>2</sup>	<u>Difference Scores Calculations</u>
0 0 0 0 2 2 1 0	-0.62 -0.62 -0.62 -0.62 1.38 1.38 0.38 -0.62 M: 0.62	0.39 0.39 0.39 0.39 1.89 1.89 0.14 0.39 SS: 5.88	

Treatment 1

$N_1: 8$   
 $df_1 = N - 1 = 8 - 1 = 7$   
 $M_1: 0.62$   
 $SS_1: 5.88$

Treatment 2 (X)	Diff(X - M)	Sq. Diff(X - M) <sup>2</sup>	<u>Difference Scores Calculations</u>
8 5 0 5 5 9 8 9	1.88 -1.12 -6.12 -1.12 -1.12 2.88 1.88 2.88 M: 6.12	3.52 1.27 37.52 1.27 1.27 8.27 3.52 8.27 SS: 64.88	

Treatment 2

$N_2: 8$   
 $df_2 = N - 1 = 8 - 1 = 7$   
 $M_2: 6.12$   
 $SS_2: 64.88$   
 $s^2_1 = SS_1 / (N - 1) = 5.88 / (8 - 1) = 0.84$   
 $s^2_2 = SS_2 / (N - 1) = 64.88 / (8 - 1) = 9.27$

#### T-value Calculation

$$s^2_p = ((df_1 / (df_1 + df_2)) * s^2_1) + ((df_2 / (df_1 + df_2)) * s^2_2) = ((7/14) * 0.84) + ((7/14) * 9.27) = 5.05$$

$$s^2_{M_1} = s^2_p / N_1 = 5.05 / 8 = 0.63$$

$$s^2_{M_2} = s^2_p / N_2 = 5.05 / 8 = 0.63$$

$$t = (M_1 - M_2) / \sqrt{(s^2_{M_1} + s^2_{M_2})} = -5.5 / \sqrt{1.26} = -4.89$$

The  $t$ -value is -4.09373. The  $p$ -value is .000744. The result is significant at  $p < .05$ .

From the above we can see the  $t$  value is -4.09373, we also yield a  $p$  value under our alpha, showing proof of statistical significance between the two groups. This analysis shows there was a positive statistically significant difference for the rating for our new website prototype.

## 5. Conclusions

### 5.1. Discussion of Results

In its current state, our prototype has shown to be completely successful in its increase of task speed and success in comparison to the old website. We are not surprised by these results, as we added search functionality that is not existent in the current website. When testing, we gave all of our participants the option to give up at any point. It is shown with the old website that a majority of the

participants decided to give up out of frustration. The minimum completion speed of the task was 14:17, and this is because a participant needs to look at every animal listing. Even if they have already found the entry that was the goal of the task, they need to still look at every entry to verify that they have the correct solution. The new website's search functionality's ordered listings allowed the participants to guarantee the task's success. Because the results of every test that we ran were shown to be statistically significant in favor of our website, we believe that we were successful in the prototyping of a more effective animal search function.

## 5.2. Lessons Learned

The way the website rating (“How likely are you to recommend this website to others?”) was captured can be interpreted differently from how we intended. This phrase needs to be dependent on “others” being interested in exotic animals, because we do not believe that all of our participants interpreted the question in this way because there were three new website ratings of 5 and one of 0. These ratings do not correlate with their high SUS's. In the future, phrasing the question, “How likely are you to recommend this website to others, assuming that they are interested in the purchase of exotic animals?” may be more reliable because it accurately conveys our question to the participant. Everything else regarding the website went well, and we are content with our results.

## 5.3. Conclusion

Overall this research project solidified the design principles the team had been introduced to during the course of the semester. The results proved to the team that the design principles when implemented correctly greatly enhanced the user experience.

# 6. Appendixes

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## 6.1. Heuristic Evaluation

Heuristic Review Template (Source: <a href="http://www.uxforthemasses.com/">http://www.uxforthemasses.com/</a> )				
Exotic Animals For Sale		Score	Comments	
<b>Features &amp; functionality</b>				
1	Features and functionality meet common user goals and objectives.	<b>Moderate</b>	<i>Overall the site provides links for the basic function of owning an exotic animal. It provides links on buying the animals and even acquiring the equipment needed to house/store the animals.</i>	
2	Features and functionality support users desired workflows.	<b>Poor</b>	<i>The workflows can be made to be more efficient. Eg the search functionality is broken and also there is no filter functionality built in that would help with identifying the animals.</i>	
3	Frequently-used tasks are readily available (e.g. easily accessible from the homepage) and well supported (e.g. short cuts are available).	<b>Moderate</b>	<i>The main links at the top of the page are also represented on the side bar on the home page as well</i>	

4	Users are adequately supported according to their level of expertise (e.g. short cuts for expert users, help and instructions for novice users).	<b>Very poor</b>	<i>There is no delineation for amateur or expert users. Everyone is subjected to the same website.</i>
5	Call to actions (e.g. register, add to basket, submit) are clear, well labelled and appear clickable.	<b>Very poor</b>	<i>Not available</i>
<b>Homepage / starting page</b>			
6	The Homepage / starting page provides a clear snapshot and overview of the content, features and functionality available.	<b>Poor</b>	<i>Provides some information and overall allows anyone to immediately go off and navigate the website</i>
7	The home page / starting page is effective in orienting and directing users to their desired information and tasks.	<b>Poor</b>	<i>Does the job and is very basic in terms of functions presented</i>
8	The homepage / starting page layout is clear and uncluttered with sufficient 'white space'.	<b>Poor</b>	<i>The homepage is slightly cluttered and ads are continually displayed.</i>
<b>Navigation</b>			
9	Users can easily access the site or application (e.g. the URL is predictable and is returned by search engines).	<b>Moderate</b>	<i>Site url is simple and to the point</i>
10	The navigational scheme (e.g. menu) is easy to find, intuitive and consistent.	<b>Poor</b>	<i>Not intuitive in terms of navigation</i>
11	The navigation has sufficient flexibility to allow users to navigate by their desired means (e.g. searching, browse by type, browse by name, most recent etc...).	<b>Poor</b>	<i>Navigation doesn't have many ways to move around. Mostly done with links</i>

12	The site or application structure is clear, easily understood and addresses common user goals.	<b>Poor</b>	<i>Overall there is a general flow to the site but you're locked into one way of getting to sections of the site.</i>
13	Links are clear, descriptive and and well labelled.	<b>Moderate</b>	<i>Links are descriptive</i>
14	Browser standard functions (e.g. 'back', 'forward', 'bookmark') are supported.	<b>Good</b>	<i>General functions in a browser are supported</i>
15	The current location is clearly indicated (e.g. breadcrumb, highlighted menu item).	<b>Poor</b>	<i>There is no indication</i>
16	Users can easily get back to the homepage or a relevant start point.	<b>Good</b>	<i>A simple click of the main logo returns users to the main page</i>
17	A clear and well structure site map or index is provided (where necessary).	<b>Very poor</b>	<i>Site map doesn't have a good mapping of the site</i>
<b>Search</b>			
18	A consisten, easy to find and easy to use search function is available throughout (where desirable).	<b>Poor</b>	<i>Search can be spotted quite quickly however it is heavily broken</i>
19	The search interface is appropriate to meet user goals (e.g. multi-parameter, prioritised results, filtering search results).	<b>Very poor</b>	<i>Once again search only seems to work when there ar no misspellings and also it only filters per state</i>
20	The search facility deals well with common searches (e.g. showing most popular results), misspellings and abbreviations.	<b>Very poor</b>	<i>Just horribly implemented</i>
21	Search results are relevant, comprehensive, precise, and well displayed.	<b>Poor</b>	<i>Returns matches to search keyword and just lists the animals found on the site</i>
<b>Control &amp; feedback</b>			

22	Prompt and appropriate feedback is given (e.g. following a successful or unsuccessful action).	<b>Poor</b>	<i>No error checking for listings</i>
23	Users can easily undo, go back and change or cancel actions; or are at least given the chance to confirm an action before committing (e.g. before placing an order).	<b>Very poor</b>	
24	Users can easily give feedback (e.g. via email or an online feedback / contact us form).	<b>Very poor</b>	<i>No forms available and the contact us page is just one email address</i>
<b>Forms</b>			
25	Complex forms and processes are broken up into readily understood steps and sections. Where a process is used a progress indicator is present with clear numbers or named stages.	<b>Very poor</b>	<i>No progress indicator</i>
26	A minimal amount of information is requested and where required justification is given for asking for information (e.g. date of birth, telephone number).	<b>Good</b>	<i>Only required name, email, location etc and overall the less information needed the better</i>
27	Required and optional form fields are clearly indicated.	<b>Poor</b>	
28	Appropriate input fields (e.g. calendar for date selection, drop down for selection) are used and required formats are indicated.	<b>Very poor</b>	
29	Help and instructions (e.g. examples, information required) are provided where necessary.	<b>Moderate</b>	<i>Necessary information is displayed for most of the listings</i>
<b>Errors</b>			

30	Errors are clear, easily identifiable and appear in appropriate location (e.g. adjacent to data entry field, adjacent to form, etc.).	Poor	<i>Accounts has error handling but nothing else does.</i>
31	Error messages are concise, written in easy to understand language and describe what's occurred and what action is necessary.	Poor	<i>For account creation it is able to let the user know what went wrong.</i>
32	Common user errors (e.g. missing fields, invalid formats, invalid selections) have been taken into consideration and where possible prevented.	Poor	<i>Listings can be made even if no account created and also listings can have missing fields and they will still be allowed to be posted.</i>
33	Users are able to easily recover (i.e. not have to start again) from errors.	Moderate	<i>Might be able to simply reset.</i>
<b>Content &amp; text</b>			
34	Content available (e.g. text, images, video) is appropriate and sufficiently relevant, and detailed to meet user goals.	Moderate	<i>There are descriptions and images for all the listings which overall do a good job of explaining what the listing is.</i>
35	Links to other useful and relevant content (e.g. related pages or external websites) are available and shown in context.	Very poor	<i>No links to external websites noted the links to more information are essentially linked to webpages on the same website.</i>
36	Language, terminology and tone used is appropriate and readily understood by the target audience.	Moderate	<i>Provides some description that is easily understood and not wordy</i>
37	Terms, language and tone used are consistent (e.g. the same term is used throughout).	Good	<i>Good description for the articles present on the site are easily understood.</i>
38	Text and content is legible and scanable, with good typography and visual contrast.	Good	<i>Words have an alright theme.</i>

Help						
39	Online help is provided and is suitable for the user base (e.g. is written in easy to understand language and only uses recognised terms). Where appropriate contextual help is provided.	<b>Very poor</b>		<i>Some terms needed to be googled in order to know what they meant.</i>		
40	Online help is concise, easy to read and written in easy to understand language.	<b>Very poor</b>		<i>Same as above</i>		
41	Accessing online help does not impede users (i.e. they can resume work where they left off after accessing help).	<b>Very poor</b>		<i>Same as above</i>		
42	Users can easily get further help (e.g. telephone or email address).	<b>Very poor</b>		<i>Same as above</i>		
Performance						
43	Site or application performance doesn't inhibit the user experience (e.g. slow page downloads, long delays).	<b>Good</b>		<i>no issues recorded when checking out the</i>		
44	Errors and reliability issues don't inhibit the user experience.	<b>Good</b>				
45	Possible user configurations (e.g. browsers, resolutions, computer specs) are supported.	<b>Good</b>				
<b>Overall usability score (out of 100) *</b>		<b>46</b>	<b>-</b>	<b>Poor</b>		

## 6.2. Cognitive Walk-through

Please note that the Cognitive Walkthrough was performed on the original website [exoticsanimalsforsale.net](http://exoticsanimalsforsale.net).

**Task Identified:** The user should search by text, search by animal type

**Parameters:**

- Search for a Grey Wolf
- Attempt to find the most inexpensive price
- Search for closest buyer near current location

**List of Actions:**

1. Go to page that has postings of animals
2. Search for a wolf
3. Review the choice of wolf postings available
4. Cycle through pages if there are multiple pages available
5. Determine which posting is the least expensive
6. Determine the closest posting to current location
7. Purchase the wolf that matches criteria

	1	2	3	4	5	6	7
Will the user know the next step?	Yes	Yes	Yes	No	No	No	No
Will the user see the control?	Yes	Yes	Yes	Yes	Yes	No	No
Will the user understand the control?	No	Yes	Yes	Yes	No	No	No
If the correct action is performed, will the user see that progress is being made toward solution of the task?	No	Yes	No	Yes	No	No	No

**Task Identified:** The user should try to determine the most expensive animal on the site

**Parameters:**

- Go to all postings available
- Sort postings and determine the most expensive animal on site

**List of Actions:**

1. Go to page that has postings of animals
2. Determine the most expensive animal regardless of type.

	1	2
Will the user know the next step?	Yes	No
Will the user see the control?	Yes	No
Will the user understand the control?	Yes	No
If the correct action is performed, will the user see that progress is being made toward solution of the task?	Yes	No

### 6.3. New GUI snapshots

Figures showing the redesigned version of the website.

**Exotic Animals for Sale**  
Handle with Care

Exotic Animals for sale   Exotic Animals Wanted   Equipment for Sale   Exotic Animal Auctions

**Classified animals**

- For sale
- Wanted
- Equipment for sale
- Auctions

**Submit**

- Animal for sale
- Animals wanted
- Equipment for sale
- Exotic for auction

**Information**

- Animal breeders
- View species
- Contact us
- Advertise

**Advanced search**

Name:    Animal category:

Max distance (in miles):    [Search](#)

**Search results**

Sort by:    29 Results

**Alligator**   [View Seller Info](#)

Reptile  
\$ 8,200  
📍 234 miles away  
Apex predator

🕒 1 days ago   Texas

**Pied Parrotfinch**   [View Seller Info](#)

Bird  
\$ 2,500  
📍 100 miles away  
Parrot me timbers

🕒 4 days ago   Wisconsin

**Grey Wolf**   [View Seller Info](#)

Mammal

**Eastern Grey Kangaroos**   [View Seller Info](#)

Mammal  
\$ 45,000  
📍 2076 miles away  
Bottle raised very friendly perfect starter mob for anyone looking to get into roos

🕒 42 days ago   Florida

**Lemur**   [View Seller Info](#)

Mammal  
\$ 500  
📍 120 miles away  
Lemur are cool

🕒 45 days ago   Georgia

**Grizzly Bear**   [View Seller Info](#)

Mammal  
\$ 7,000  
📍 753 miles away  
Yogi bear gave us a bad name

🕒 48 days ago   Alaska

**Great Plains Toad**   [View Seller Info](#)

Amphibian  
\$ 700  
📍 592 miles away  
Toad, nothing to see here

🕒 54 days ago   Mexico

**Painted Turtle**   [View Seller Info](#)

## 6.4. Instructions for participants

The participants were instructed to find the contact information of the seller selling the most expensive animal on the website. They were also told session would end as soon as they wrote down a name and phone number and they could give up at any time if they wanted.

## 6.5. Post-session questionnaire

**System Usability Scale (SUS)**  
**CSE463: Human Computer Interactions**  
**Website: <https://exoticanimalsforsale.net>**

**Participant Name:** \_\_\_\_\_

**Email:** \_\_\_\_\_

Date: 4 / 12 /19

Please select the answer that best expresses how you feel about each statement after using the website today.

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
I think I would like to use this website frequently.	<input type="checkbox"/>				
I thought the website was easy to use.	<input type="checkbox"/>				
I think that I would need the support of a technical person to be able to use this website.	<input type="checkbox"/>				
It is easy to navigate within the website	<input type="checkbox"/>				
I thought there was too much inconsistency on the website.	<input type="checkbox"/>				
I would imagine that most people would learn to use this website very quickly.	<input type="checkbox"/>				
I found the website very cumbersome to use.	<input type="checkbox"/>				
I felt very confident using the website	<input type="checkbox"/>				
The website has a clean and simple presentation	<input type="checkbox"/>				
I am able to find what I need quickly on this website	<input type="checkbox"/>				

How likely are you to recommend this website to others? (Please circle your answer)

Not at all likely 0 1 2 3 4 5 6 7 8 9 10 Extremely likely