Product: S.S. Media

Client: Doctor Judith E. Rosenbaum

User Interface Design Document

Black Bear Analytics

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November 24, 2020

Revision History

Version Number	Release Date	Description
Version 1.0	11/24/2020	Original Release

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1. Introduction

The purpose of this section is to introduce the reader to both this document and the system architecture for the project, detailing introductory information that will be useful for the reader to know.

1.1 Purpose of This Document

The purpose of the User Interface Design Document (UIDD) is to clearly outline the user interface design agreed upon by both the client (Doctor Rosenbaum) and Blackbear Analytics for the S.S. Media scraping tool. The User Interface will meet all requirements specified in the Software Requirements Specification (SRS). This document will cover all user interface design details. This includes User Interface Standards, a Navigation Diagram, a User Interface Walkthrough, Data Validation, and a Report Formats.

The intended readership of this document includes Developers, Testers, the Client, and End Users. Developers will review this document to more fully understand the system user interface and to help guide their efforts in the system's creation. Testers can use this document to help guide them in their testing of the interface helping guarantee proper functionality of the product. The Client will read this document to have an understanding of the design of the product commissioned as well as guarantee that their development team understands what is needed out of the product. The end user would review this document to better understand the product's user interface design.

1.2 References

Black Bear Analytics SRS Document

Black Bear Analytics SDD Document

UI Design :
https://www.figma.com/file/qc0MoZOfnAJrwfYVoisxcN/BlackBearAnalytics_Mockup?node-id=0%3A1

2. User Interface Standards

The User Interface Standards section will go over the design standards and themes that are used throughout the user interface. This section also touches on the general error handling.

As seen in Figure 2.1 and 2.2, the drop down boxes are of the same component and will display an example of input in the field when the user has not selected an option yet. Clickable buttons will only be made clickable when valid input in the corresponding text field(s) is entered, until then the button will be greyed out and not be able to be clicked. Once valid input is entered into every field needed the button will be highlighted and clickable. Toggles will be highlighted when clicked to represent that they are selected and greyed out when not. Labels for buttons and text fields will be descriptive as to what the button does when clicked or what is intended to be entered in the text field. Text fields also provide an example of possible input above the field. Navigation of the user interface will be discussed later in this document. All of the themes listed above are common components within the user interface and will be used throughout.

General error handling will typically attempt to send the user back to the last screen they were at with all of the valid inputs, if any, that the user had entered before the error occurred. If this is not possible due to corrupt or invalid data, the user will be sent back to the home page, and the user will need to manually enter valid input data again. For example, if the user were to hit an error during the Search Criteria stage, having entered the Platform and a single Hashtag they wished to look for, then the user would be sent back to the Search Criteria stage with the selected platform still selected, and the Hashtag still entered. The user will make another attempt to enter valid inputs, and continue on without further interruption. If the user's search criteria data, such as the selected platform and hashtag, were to be corrupted, the user would then be sent back to the home page, without any inputs previously entered being saved. The user would then need to go back to the Search Criteria page and manually re-enter any valid inputs they had before the error occurred.

Figure 2.1: New Search Page

Figure 2.2: Login Page

3. User Interface Walkthrough

The User Interface Walkthrough section is intended to help visualize what the website will look like. It will include a Navigation Diagram detailing which pages can navigate to which. Following that will be a walkthrough of each unique page on the website including information on how to navigate to and from the page, what the purpose of the page is, it's main functions, and descriptions of the functionality of all buttons and fields on the page.
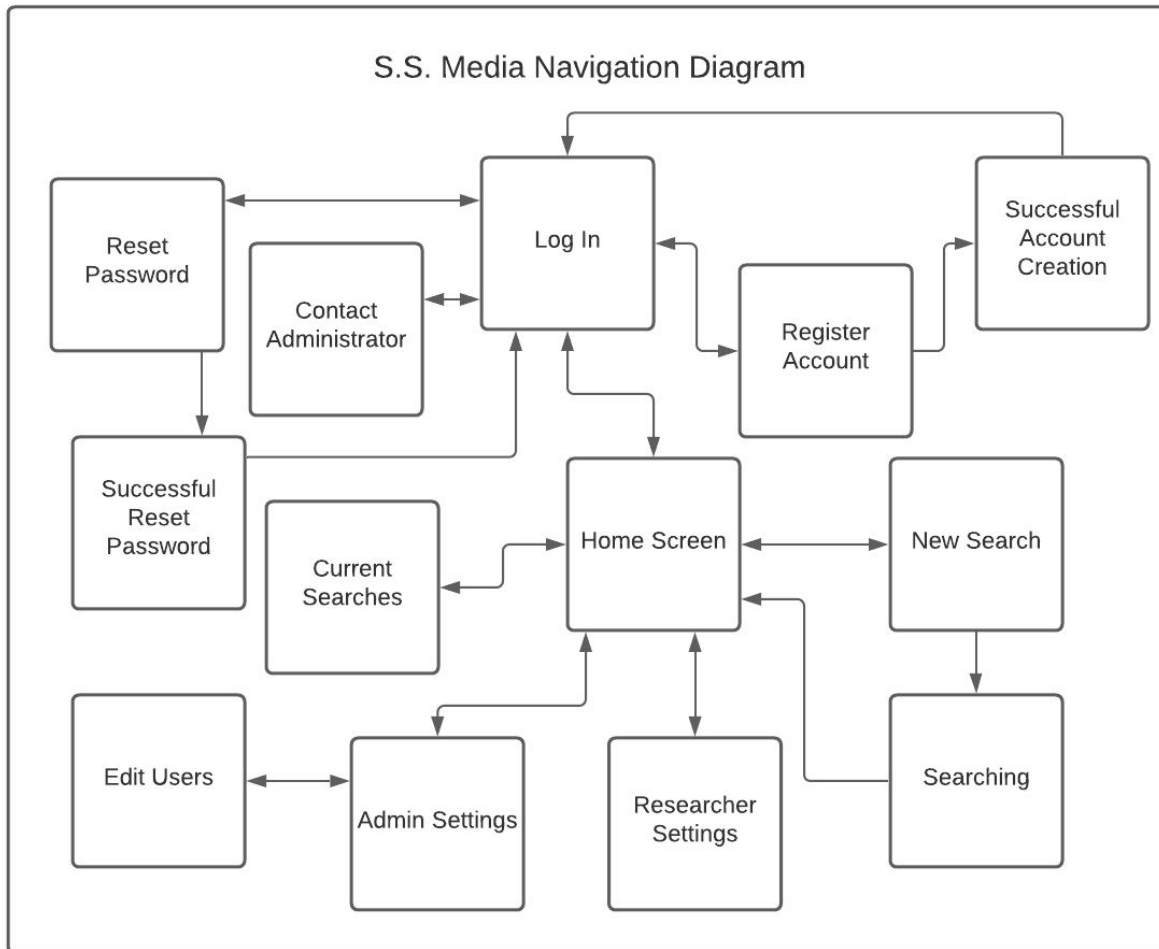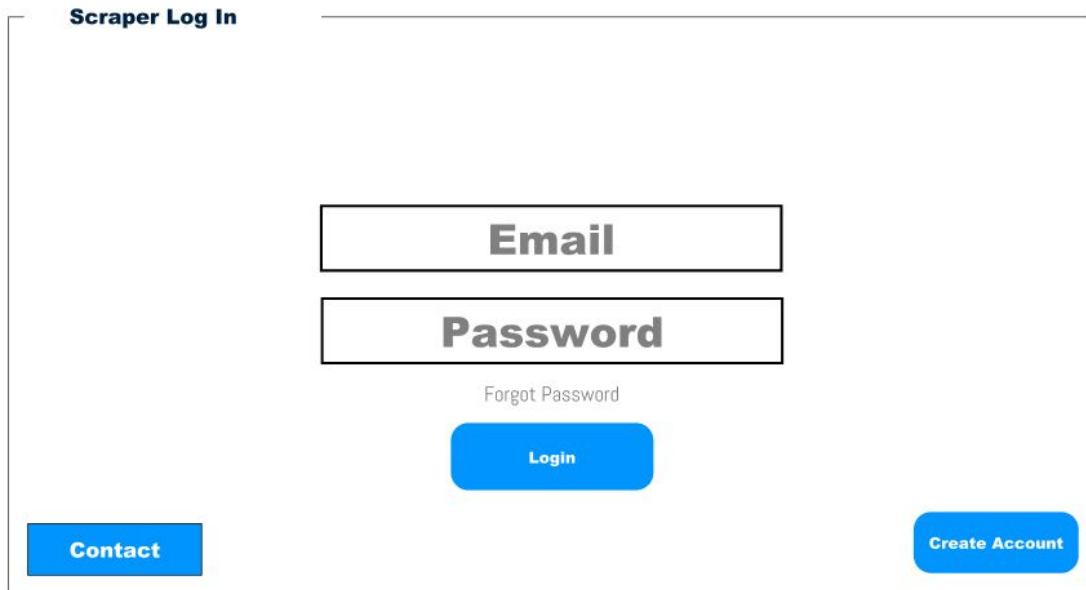

Figure 3.1: S.S. Media Navigation Diagram

The S.S. Media Navigation Diagram, as seen in Figure 3.1, displays all pages that can be visited by the user on the scraping website. When a user navigates to the website for the first time, they will be brought to the login page. From there they will be able to navigate to any other page by the way of buttons. The Navigation Diagram shows all relationships between the pages. An arrow pointing from one page to another indicates that there is a way to navigate to the pointed at page from the current page. The following page descriptions will show a mockup of each page,

including how to navigate to and from the page, what the purpose of the page is, it's main functions, and descriptions of the functionality of all buttons and fields on the page.

Figure 3.2: Login Page

The Login Page, Figure 3.2, is the first screen a user will see upon entering the site. It is navigated to either as the first page a user would view upon viewing the website, or via the buttons on the Reset Password, Successful Reset Password, Contact Administrator, Register Account, Successful Account Creation, or Home Screen Pages. It's main purpose is to log into a user's account, but includes extra functionality. It includes 4 buttons and 2 text fields.

- Email: This text field will take email text input from the user.
- Password: This text field will take password text input from the user.
- Forgot Password: This button will navigate the user to a new page that will include instructions on how to recover their password.
- Login: This button will take the text inputs from the Username and Password text fields and attempt to use them to log into a user's account. Should login be successful, the user will be brought to the home screen. If it is unsuccessful an invalid username/password message will be displayed.
- Create Account: This button will navigate the user to the Account Creation Page.
- Contact: This button will navigate the user to the Contact Administrator Page.

Figure 3.3: Create Account Page

The Create Account Page, Figure 3.3, is navigated to upon clicking the Create Account button on the Login Page. It's main purpose is to gather information required for a new user account and includes 4 text fields and 1 button.

- Email: This text field will take email text input from the user.
- Name: This text field will take name text input from the user.
- Password: This text field will take password text input from the user.
- Re-type Password: This text field will take retyped password text input from the user.
- Create Account: This button will take the information inputted in this page's text fields and check for validity. If information is not valid an error will be displayed to the user. If the input is valid and the two password inputs match each other, the information is saved and sent to an administrator for confirmation. The user is then sent to the Account Creation Success page.

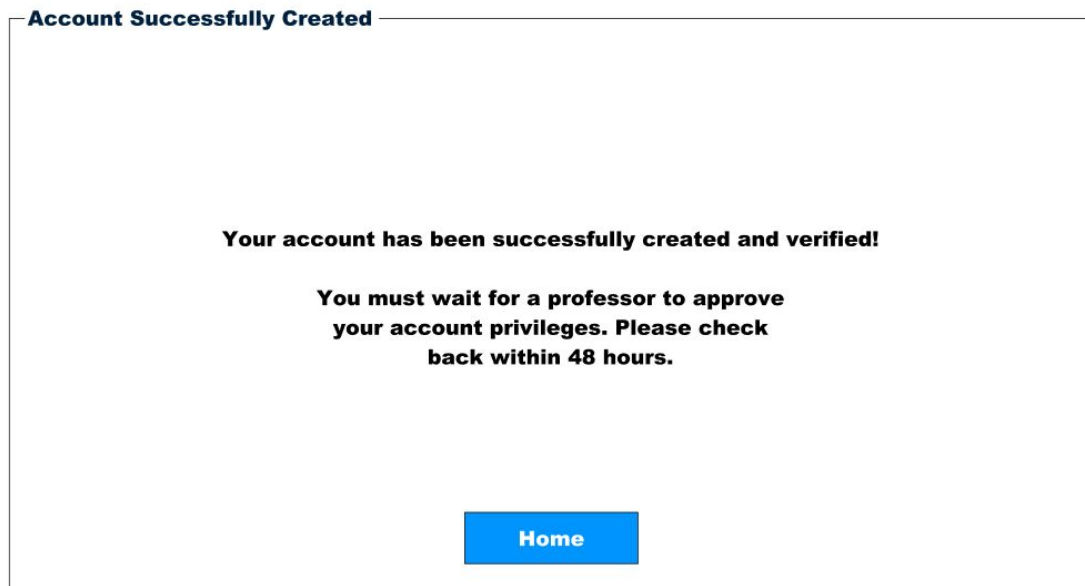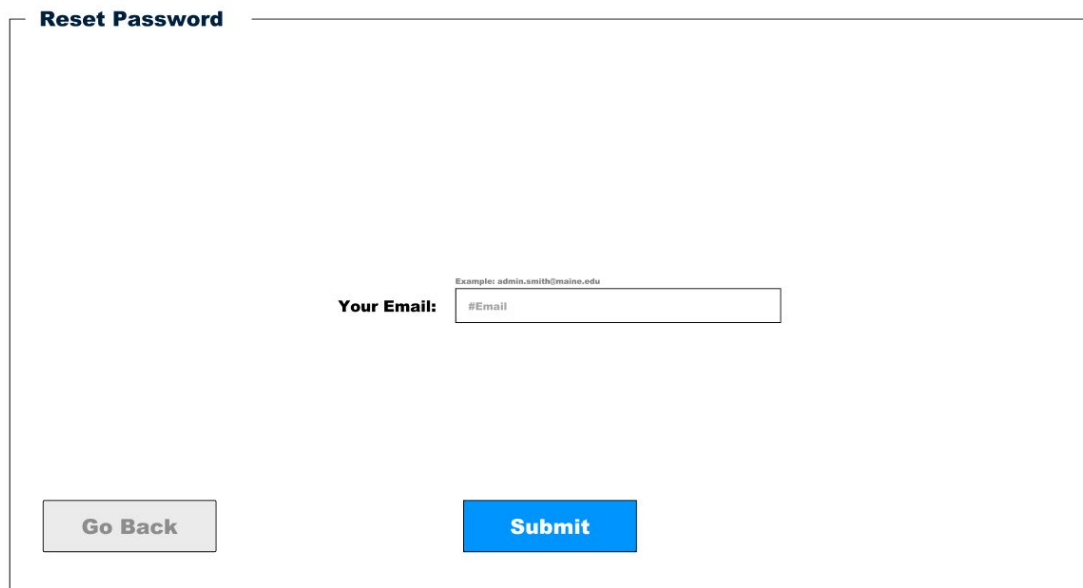Figure 3.4: Account Creation Success Page

This Account Creation Success Page, Figure 3.4, is navigated to by clicking on the Create Account button on the Create Account page with valid inputs. This page's primary function is to provide a message to the user about successful account creation and waiting for account approval. The page includes 1 button.

- Home: This button will navigate the user to the Login page.

Reset Password

Your Email:

Example: admin.smith@maine.edu

#Email

Go Back   Submit

Figure 3.5: Reset Password Page

This Reset Password Page, Figure 3.5, is navigated to by clicking on the Reset Password button on the Login page. This page's primary function is to reset a user's password after they have forgotten it. The page includes 1 text field and 2 buttons.

- Your Email: This text field takes email text input from the user.
- Submit: The submit button will take a user's input from the Your Email text field and check if there is a user account with that email associated to it. If there is a match, that account's password will be reset and the user will be navigated to the reset password confirmation page.
- Go Back: This button will navigate the user back to the Login page
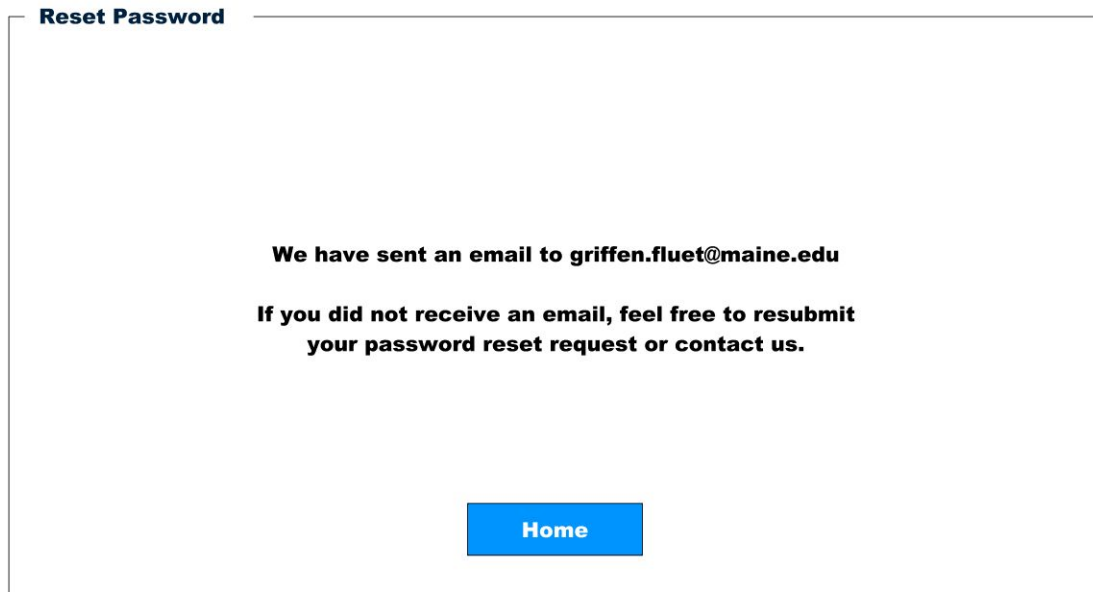
Figure 3.6: Reset Password Success Page

This Reset Password Success Page, Figure 3.6, is navigated to by clicking on the Submit button on the Reset Password page with valid input. This page's primary function is to provide a message to the user directing them to their email for further instruction. The page includes 1 button.

- Home: This button will navigate the user to the Login page.

Contact Us Form

Example: admin.smith@maine.edu

Your Email: #Email

500 characters left

Message: #Message

Go Back   Submit

Figure 3.7: Contact Administrator Page

This Contact Administrator Page, Figure 3.7, is navigated to by clicking the Contact button on the Login page. This page's primary function is to allow the user to send a message to an administrator. The page includes 2 text fields and 2 buttons.
- Your Email: This text field takes email text input from the user.
- Message: This text field takes message input from the user.
- Submit: This button takes the text input from the two text boxes on this page and sends the information as a message to an Administrator.
- Go Back: This button will navigate the user back to the Login page.
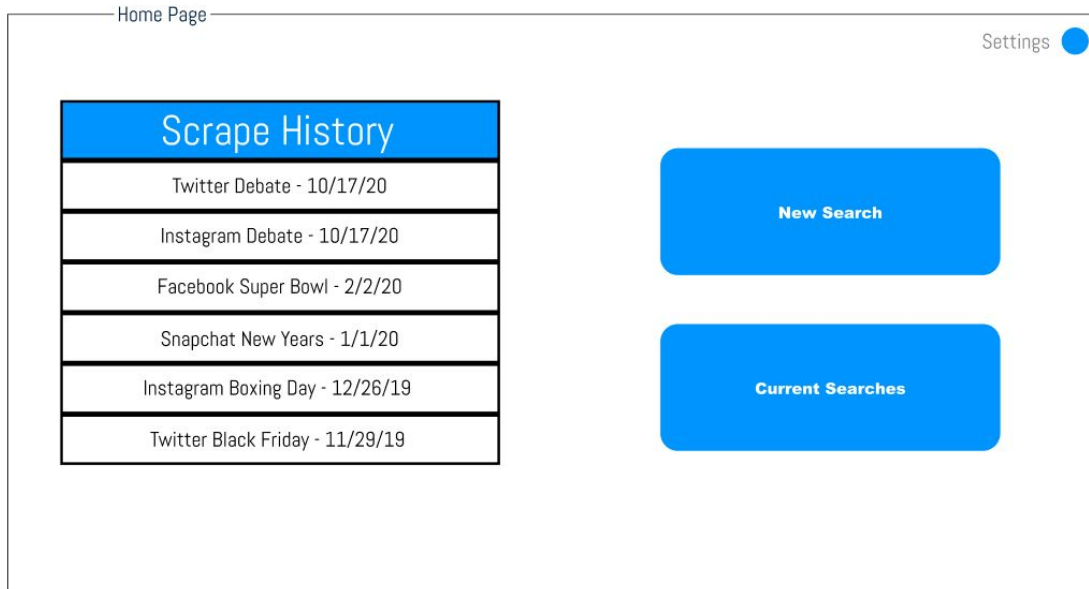
Figure 3.8:Home Page

The Home Page, Figure 3.8, is navigated to by clicking on the Login button on the Login page. It's primary function is to help navigate the user to the applications primary functions. The page has 3 buttons and one table with many buttons.

- New Search: This button will navigate the user to the New Search page.
- Current Searches: This button will only be visible if the user is logged into an Administrator account. When clicked it will navigate the user to the Current Searches page.
- Settings: This button will navigate the user to the settings page.
- Scrape History: This table will display a list of previous scrapes the user has done. Upon clicking one of these previous scrapes the user will be navigated to the new search page with that scrape's specific search results.

Figure 3.9: Admin Settings Page

The Admin Settings Page, Figure 3.9, is navigated to from the home page. This is the page that shows up for admin users. It allows the admin users to approve accounts, delete accounts, or to adjust personal email data and the location for the downloads. It also allows the user to set the search to an always advanced search. The user can also enable and disable email notifications.

- Edit Users: This button will bring the user to the Edit Users page.
- See Scrape History: Will enable/disable the scrape history on the home page.
- Always Advanced Search: Will enable/disable advanced search being the default search.
- Email Notifications: Will enable/disable email notifications for this user.
- Approve Accounts: This section will allow the admin user to approve or delete account requests.
- Save Changes: This button will save any changes made to the settings in a config file.

Figure 3.10: Edit Users Page

The Edit Users Page, Figure 3.10, is accessed via the Edit Accounts button on the Admin Settings page. It allows the user to delete, ban, or edit any other accounts, as well as see which accounts are admin and which are not.
- Delete: Deletes the selected account(s).
- Ban: Bans the selected account(s), but does not delete the information.
- Edit Name: Edits the name of the selected account(s).
- Set to Admin: Gives admin rights to the selected account(s).
- Done: Navigates to the previous page, the Admin Settings.

Figure 3.11: Researcher Settings Page

The Researcher Settings Page, Figure 3.11, is navigated to from the Home page. This is the page that shows up for non-admin users.

● Email: Allows the user to edit their email address (which is also used as their login).
● Download Location: Allows the user to change where the downloads go on their computer.
● See Scrape History: Will enable/disable the scrape history on the home page.
● Always Advanced Search: Will enable/disable advanced search being the default search.
● Email Notifications: Will enable/disable email notifications for this user.
● Logout: Logs out of the user's account.
● Deactivate Account: Deactivates and deletes the information of the user's account.
● Save Changes: Saves any changes made to the settings, and navigates to the previous page, the Home page.

Figure 3.12: New Search Page

The New Search Page, Figure 3.12, is navigated to from the Home page. Its primary purpose is to start a new search, whether it be a basic or an advanced search. This page has two drop down menus, three different ways of searching (hashtags, location, and/or phrase), which can be searched for in any combination (as long as it includes at least one of the options), and boxes in order to fill out the search queries for the hashtags, location, or phrases.

- Platform: Allows the user to select which platform will be scraped.
- Search type: There are two options, basic or advanced. The advanced version of this will be shown on the next page.
- Hashtags button: Enables/disables search by hashtags.
- Location: Enables/disables search by location.
- Phrase: Enables/disables search by a phrase.
- Hashtags text field: Allows the user to enter hashtags to search for.
- Case Sensitive: Enables/disables case sensitivity with the search.
- Misspellings: Enables/disables letting the program look for common misspellings of the word(s).
- Location text field: Allows the user to enter locations to search for.
- Phrase text field: Allows the user to enter a phrase to search for.
- Save Search: This button saves the search to a database so that it can be searched for again or documented.
- Continue: Continues to the next page: the Searching page.
- Home: Navigates the user to the Home Page.

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- Calendar: This calendar will allow the user to select a date range for the search specifications.
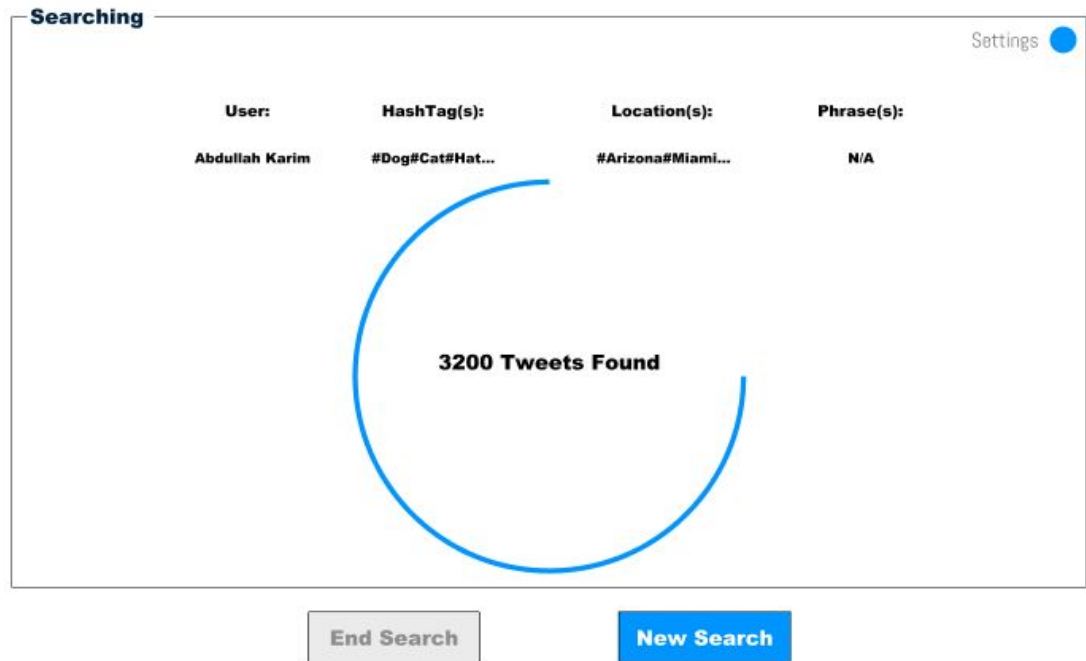
Figure 3.13: Searching Page

This is the Searching page, Figure 3.13. The primary purpose of this page is to show the scrape that is currently in progress, and show how many pieces of data (tweets, instagram posts, etc.) have been found.
- End Search: stops the search and finishes saving the data found.
- New Search: navigates to the Search page.
- Settings: navigates to the settings page, depending on whether the user account is an admin or a basic account.

Figure 3.14: Current Search Page

The Current Search Page, Figure 3.14, is navigated to by clicking on the Current Searches button on the on the Home page. It's primary function is to display all searches being run on the platform at the current time. The Page has 2 buttons, 2 drop down boxes, and one table.
- New Search: This button will navigate the user to the New Search page.
- Settings: This button will navigate the user to the settings page.
- Filter By: This drop down box will allow the user to filter the current searches by Every Search, a Specific User, or Social Media Platform
- Sort By: This drop down box will allow the user to sort the current searches by Most Recent, Least Recent, Number of Posts Scraped, and Estimated Time to Completion.

4. Data Validation

This section shows the data a user will be able to enter into our product. It includes a unique identifier, corresponding GUI screens (see above sections), the formatting of data, and the limits for each data input.

Table 4.1: Data Input Validation Specifications

Unique ID	Data Type	Data Format	Limits	GUI Screen (s)
Email	String	[Email]@[domain].[extension]. Cannot be empty.	100 chars	1. Reset Password 2. Settings 3. Create Your Account 4. Contact Us Form 5. Scraper Log In
Download Location	String	[Drive]\[filepath]\...\[destination]. Cannot be empty.	500 chars	1. Settings
Search Users	String	Any acceptable string that follows a string regex checking if it's empty.	50 chars	1. Edit User Accounts
Contact Message	String	Any acceptable string that follows a string regex checking if it's empty.	500 chars	1. Contact Us Form
Password	String	Any acceptable string that follows a string regex checking if it's empty. Created passwords must have a capital letter, a lowercase letter, a number, and a special symbol. Passwords must also be at least 8 characters long.	40 chars	1. Scraper Log In 2. Create Your Account
Name	String	[First Name] [Middle Initial]. [Last Name]. Must follow this format.	60 chars	1. Create Your Account
HashTag(s) Field	String	Each hashtag follows the	60 chars	1. Social Platform

		format: #[string]. Multiple hashtags can be input as long as they are comma-separated.		Selection
Location(s) Field	String	Each Location can be entered as a string, with multiple locations being designated as comma-separated values.	100 chars	1. Social Platform Selection
Phrases(s) Field	String	Each Phrase can be entered as a string, with multiple phrases being designated as comma-separated values.	280 chars	1. Social Platform Selection
Run For Field	integer	Must be between 1 and the maximum signed integer limits.	10 chars	1. Social Platform Selection - Advanced Search

5. Report Formats

This section covers the hard copies that our users will get when downloading scraped information.

Our product generates a downloadable .zip file. This .zip contains a folder of all images scraped as well as a .csv file for text data. This .zip has its name made up from the keywords of the search. The name of each picture file corresponds to the unique ID of each picture in a .csv file discussed below.

A separate .csv file is located at the same level as the image folder directory. It contains all text data from a scrape. Figures of the formatting for both the .csv file and the picture file system are found below:

| id	date	time	timezone	user_id	username	tweet	replies	retweets	likes	location	hashtag	Link
1	MM/DD/YYYY	23:59:59	UTC	1	#beta_tester	#test	0	0	1	Arkansas City	#test	www.test.com/postname
2	MM/DD/YYYY	23:59:53	UTC	2	#beta_tester	#test	0	0	1	Arkansas City	#test	www.test.com/postname
3	MM/DD/YYYY	23:59:49	UTC	3	#beta_tester	#test	0	0	1	Arkansas City	#test	www.test.com/postname
4	MM/DD/YYYY	23:59:45	UTC	4	#beta_tester	#test	0	0	0	Arkansas City	#test	www.test.com/postname
5	MM/DD/YYYY	23:59:44	UTC	5	#beta_tester	@test	0	0	0	Arkansas City	#test	www.test.com/postname
6	MM/DD/YYYY	23:59:42	UTC	6	#beta_tester	@test	0	0	0	Arkansas City	#test	www.test.com/postname
7	MM/DD/YYYY	23:59:41	UTC	7	#beta_tester	@test	2	0	5	Arkansas City	#test	www.test.com/postname
8	MM/DD/YYYY	23:59:37	UTC	8	#beta_tester	@test	0	0	1	Arkansas City	#test	www.test.com/postname
9	MM/DD/YYYY	23:59:37	UTC	9	#beta_tester	@test	0	0	1	Arkansas City	#test	www.test.com/postname
10	MM/DD/YYYY	23:59:36	UTC	10	#beta_tester	@test	0	0	0	Arkansas City	#test	www.test.com/postname
11	MM/DD/YYYY	23:59:34	UTC	11	#beta_tester	@test	1	1	0	Arkansas City	#test	www.test.com/postname
12	MM/DD/YYYY	23:59:31	UTC	12	#beta_tester	@test	0	0	4	Arkansas City	#test	www.test.com/postname
13	MM/DD/YYYY	23:59:30	UTC	13	#beta_tester	@test	0	2	2	Arkansas City	#test	www.test.com/postname
14	MM/DD/YYYY	23:59:27	UTC	14	#beta_tester	@test	0	0	0	Arkansas City	#test	www.test.com/postname
15	MM/DD/YYYY	23:59:25	UTC	15	#beta_tester	@test	7	12	3	Arkansas City	#test	www.test.com/postname
16	MM/DD/YYYY	23:59:22	UTC	16	#beta_tester	@test	1	0	2	Arkansas City	#test	www.test.com/postname
17	MM/DD/YYYY	23:59:22	UTC	17	#beta_tester	@test	0	0	0	Arkansas City	#test	www.test.com/postname
18	MM/DD/YYYY	23:59:21	UTC	18	#beta_tester	#test	0	0	3	Arkansas City	#test	www.test.com/postname
19	MM/DD/YYYY	23:59:18	UTC	19	#beta_tester	#test	0	0	0	Arkansas City	#test	www.test.com/postname
20	MM/DD/YYYY	23:58:55	UTC	20	#beta_tester	#test	1	1	1	Arkansas City	#test	www.test.com/postname
21	MM/DD/YYYY	23:58:53	UTC	21	#beta_tester	#test	0	0	0	Arkansas City	#test	www.test.com/postname
22	MM/DD/YYYY	23:58:46	UTC	22	#beta_tester	#test	0	0	0	Arkansas City	#test	www.test.com/postname
23	MM/DD/YYYY	23:58:46	UTC	23	#beta_tester	#test	0	0	0	Arkansas City	#test	www.test.com/postname
24	MM/DD/YYYY	23:58:39	UTC	24	#beta_tester	#test	0	0	0	Arkansas City	#test	www.test.com/postname
25	MM/DD/YYYY	23:58:39	UTC	25	#beta_tester	#test	1	0	0	Arkansas City	#test	www.test.com/postname
26	MM/DD/YYYY	23:58:35	UTC	26	#beta_tester	#test	0	1	2	Arkansas City	#test	www.test.com/postname

Figure 5.1: .csv File Formatting
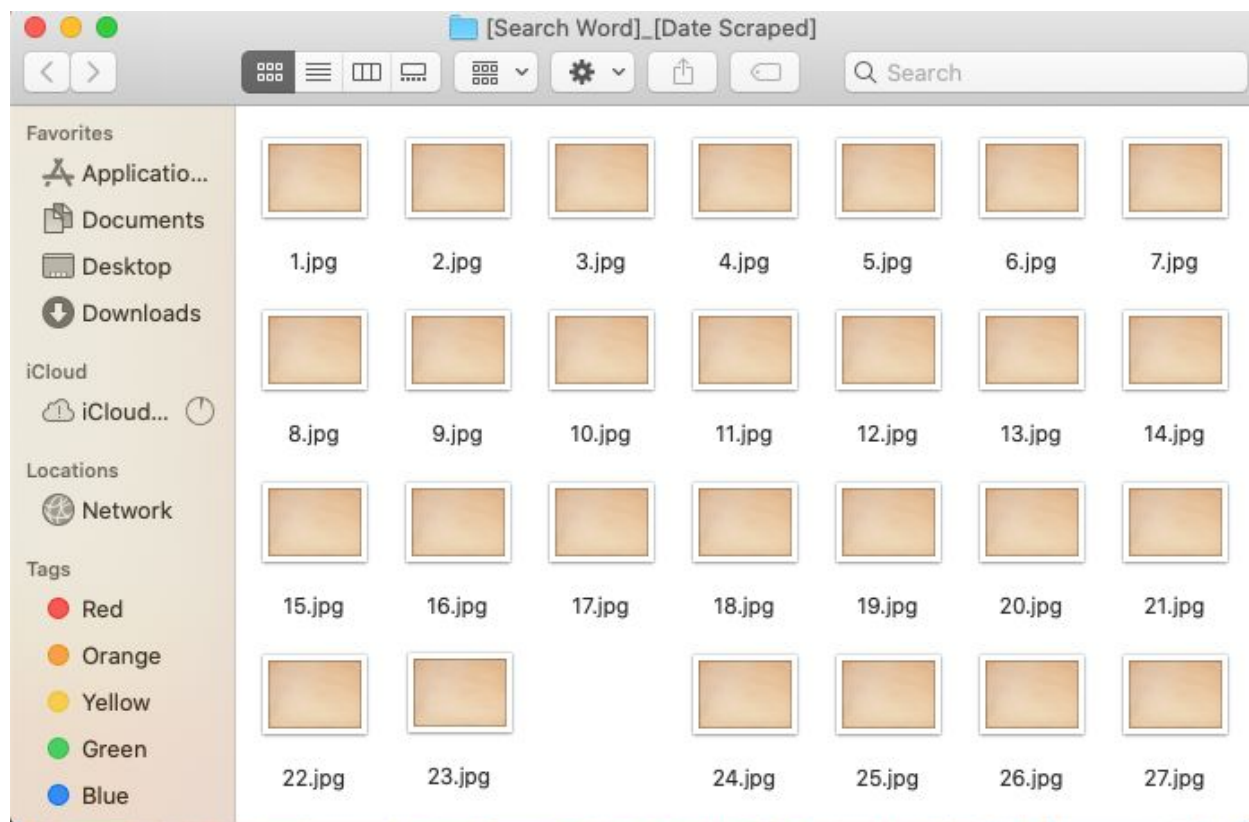
Figure 5.2: Picture File System Formatting

Appendix A – Agreement Between Customer and Contractor

The client (Doctor Rosenbaum) and Blackbear Analytics agree that the system's design meets all requirements prescribed in the SRS document and will be implemented in good faith. All designs will be implemented as close to the specifications in the user interface design document as possible, with margins for error being slim or none. In the event that implementation must diverge from the design, the development team will notify the client as soon as possible and work together with the client until a suitable agreement is reached. If the client would like to add designs/requirements for the system's user interface design after signing this document, Blackbear Analytics bears no responsibility for the failure to implement new designs, but will attempt to add them in good faith. Should any new designs be added, the deliverables schedule in section 2 and 3 of the SRS document will be updated immediately to reflect changes, and the designs/requirements discussed will be reflected in this document by the next deliverable deadline and changes will be finalized with the client.

Name	Signature	Date

Customer:

Judith E. Rosenbaum   11/25/20

Comments:

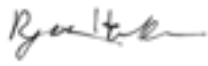**Team:**

Ryan M. Handlon   November 24th, 2020
Comments:

Abdullah I. Karim   November 24th, 2020
Comments:

Griffin L. Fluet   November 24th, 2020
Comments:

Colleen DeMaris   November 24th, 2020
Comments:

James West   November 24th, 2020
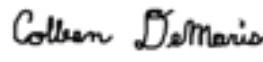
Comments:

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Appendix B – Team Review Sign-off

By signing your name below, you acknowledge that you are a member of Blackbear Analytics and have read the document with an in-depth comprehension of the scribed materials. You agree to complete all designs stated on this document as is, in good faith. Should any new designs come up, you agree to assist in re-drafting this document for approval as described in Appendix A. You agree that it is not required to complete designs added after this version is released, but understand that all designs, new or old, must be implemented in good faith.

Ryan M. Handlon   November 24th, 2020
Comments:

Abdullah I. Karim   November 24th, 2020
Comments:

Griffin L. Fluet   November 24th, 2020
Comments:

Colleen DeMaris   November 24th, 2020
Comments:

James West   November 24th, 2020

Comments:

Appendix C – Document Contributions

Ryan, Abdullah, Griffin, and Colleen contributed 16.25% total to this document. James contributed 35% because he headed nearly all the design for the mockup on figma. Ryan Handlon created half of the User Interface Walkthrough (Section 3). Abdullah Karim helped in the creation of Data Validation (Section 4) and Report Formats (Section 5). Griffin Fluet contributed massively to the User Interface Standards (Section 2). Colleen DeMaris did half of the User Interface Walkthrough (Section 3). James West created the mockup on figma and helped with the User Interface Standards (Section 2). The Appendices were appended and modified from the SRS document and Appendix C have been read and reviewed by the whole team.