**Trend Tracker**

**Overview**

For our term project, we wanted to build a tool that aided in the analysis of trending topics on the internet. We were inspired by Google Trends and Socialblade. Google Trends uses an unbiased sample of anonymous, categorised Google search data to show rises and and falls in a topic’s popularity overtime. While the data can be filtered by geography and date, a great addition to the application would be the ability to view the occurrence of these topics not only on Google, but on other popular websites and applications. Hashtags are frequently used across social media networks and can easily be used to provide more insight on where on the internet a topic is popular and how users view it. Socialblade is similar to Google Trends in that it displays rises and falls, but instead of searches It tracks user growth for accounts on YouTube, Twitch, Instagram, and Twitter. It was a great inspiration for where we would source our trend data from. Overall Trend Tracker was designed to provide users an easy way to analyze a trending topic while providing easy to understand data and statistics.

**Who it Serves**

This application has the potential to serve a variety of groups. One could be marketing teams. Having the ability to see rises and falls in a brands product or name popularity on different social networks can aid marketing teams in deciding where to target ads. Viewing posts relating to their brand can also help them gauge public perception of them. This can also be a fun tool for anyone interested in data analytics. It keeps things simple by requested one input at a minimum and returning data in an easy to read format.

**Directory Structure**

**TrendTracker/**

The two main files are index.php and dashboard.php. They are the landing page

and dashboard page respectfully.

**TrendTracker/includes**

Each of the main PHP pages have include statements

for their header and footer. The dashboard has one additional include statement

for embedded data.

**TrendTracker/resources**

The resources folder is where all our JavaScript and CSS lie.

**TrendTracker/mockups**

Initial design ideas for the landing and dashboard pages

**User Interface**

Our goal was to keep the design simple while also giving the user the option to choose what they see. To start the user off, we initially show them a splash page. This is what the user sees before being taken to the main content of the application. They only have the ability to search for a trend. They can’t see or filter and data. Different feed columns and date filtering is a feature given when the user reaches the dashboard page. After entering a query, the user is redirected to the dashboard. All the feeds are initially closed and by clicking each the user can toggle feeds from different websites and social networks relating to their topic of choice. If the user wants to search a new topic they can enter it the search bar once again and get different results. They can also use the dropdown date menu to select a new date range or enter a custom one by clicking the “Custom Date Range” option. This will open a form that accepts a start date and end date both in “yyyy-mm-dd” format. After that the user can press enter or the search button to reload the page and get updated results.

**Prototypes**

See *MockLandingPage.jpg*, *DashbaordMockup.jpg,* and *InstuctionalMockDashboard.jpg* in the *Mockups* folder.

**Flow of Data**

The main content of the page is in the feed cards. In each card is data abstracted from a given source that is presented in a readable form. Anytime the user wants to update or filter the data, they can use the dropdown date range menu to select a new range and simply reload the page and pen the cards to get the updated results. Input data can also be passed to the search bar at anytime, and upon reload the data in the cards will be updated to reflect the trend the user input.

1. **Landing Page:** On the landing page, things are kept simple for the user. They are only given a search box to input topics. This is to prevent any initial confusion. A simple tag line is given to the user to explain the basic use of the application.
2. **Help Button:** A Help button with a question mark icon is attached to the left of the search bar to give the user some direction if they need it.
3. **Search Box**: Upon clicking the green search button or pressing enter, the user’s search is submitted and validated.
   1. **Error Case:** If the input is empty or full of whitespace, the form will not submit, the search box will shake, and the search button will turn red. A popup will also be displayed telling the user the error.
   2. **Success Case:** If the input is successful, the user will be redirected to the dashboard page
4. **Dashboard Page:** The dashboard contains all feeds for the input the user searched. The date range and query will also be displayed in the search box and date range dropdown.
5. **Welcome Message:** Whenever a user enters the dashboard from the landing page, a welcome message is displayed to tell the user how to use the Trend Tracker dashboard. In a couple sentences, the messages mentions the search box, date range filter, and feed cards.
6. **Feed Cards:** Feed cards are identified by their data source. They have the ability to be collapsed by the user to create a less crowded screen or to focus on one feed of information. For example. A Twitter Feed Card would have the Twitter logo and name on the top of it. Once the header is clicked, information about the feed would be displayed in a medium sized area under the header. Feed cards are the main content of Trend Tracker.
7. **Dropdown Date Menu:** This menu gives the user the option to control the range of the data displayed in the feed cards. They have the general options of Days, Week, Month, and Years when deciding how far back the data should go. They also have the option of entering their own date range.
8. **Custom Date Range Menu:** This menu pops up after the user clicks on the “Custom Date Range” option in the Dropdown Date Menu. It will open a form and allow the user to enter a start and end date in “yyyy-mm-dd” format. Error checking is in place to alert the user of invalid input.

**Nielsen’s Ten Usability Heuristics**

**Visibility of System Status**

Users could be informed of the current status and recent changes to the website through the use of a blog or an instructional popover tour. We could do this similar to the way we use pop overs for error display and minimal instructions.

**Match between System and the Real World**

The application is being developed as a tool for marketing teams and any one with an interest in analytics. We can assume that these parties have some history with similar applications, but in the case that they aren’t we have made the interface simple and tried to keep the information presented to be minimal. The application's data is presented on a series of short, easy to read cards with each having a label for its data source and a display of said data in its body.

**User Control and Freedom**

The application is essentially one page. The landing page only serves to take the user to the main dashboard page and show them the results of their search..

**Consistency and Standards**

Information and input fields are in the same place or close to it between the landing and dashboard pages.

**Error Prevention**

The forms used to supply information are validated before submission to help prevent user error. For example, input fields are checked for whitespace, empty values, and proper formatting.

**Recognition Rather than Recall**

The interface for the application is designed to be intuitive and easy. For example, links are clearly labeled and available on each page.

**Flexibility and Efficiency of Use**

Auto-completion is available in the data-entry parts of the application. This makes it easier for users to get results from the application with less time spent entering data. For more detailed information, the user can click on a card and get more information on the feed.

**Aesthetic and Minimalist Design**

The amount of input required from the user is minimized. Essentially only a valid topic is required and data can then be displayed. There are also collapsable feeds to prevent an overflow of information for the user.

**Help Users Recognize, Diagnose, and Recover from Errors**

Form validation and along with simple pop over and alert messages helps users identify and fix problems while attempting to enter data.

**Help and Documentation**

Contextual help is available on each page to help direct the user to requested information. All the user would need to do is click on a box with a question mark.

**Use Cases**

**Use Case 1: Tim Smith**

* New User
* Junior
* Computer Science major
* Familiar with software systems
* Interested in analytics

Tim Smith is a junior Computer Science major at Rensselaer Polytechnic Institute. In his spare time, he has started to develop an interest in analytics. He has already experimented with online web traffic and analytics tools since he is frequently browsing the internet. One day he sees a new website mentioned on a forum that tracks trend data similar to Google Trends. He decides to check it out in the middle of his lecture. With the recent rise in political tension, he is curious how often the topic of gun control comes up. He enters the landing page of the site and immediately reads the tag line. He then enters “gun control” into the search box and presses “Enter”. Tim is redirected to the dashboard and is given the general “welcome message” that displays when a user comes from the landing page to the dashboard. He reads it and gets a general idea of how to use Trend Tracker. Tim tries to click each feed card as instructed and understands that the cards display trend data and content feeds different sources that relate to the requested topic. Tim also starts to read the cards. After clicking the Trends card, he hovers over it and sees a graph from Google Trends that shows the amount of Google searches overtime for the topic. He then clicks the Twitter feed card and starts to scroll through tweets in the last month about gun control. Tim’s professor notices Tim is not paying attention in lecture and respectfully asks him to close his laptop. Tim complies and closes it. It didn’t take him long to enter input and get results from Trend Tracker. He has decided to use the application again later, search other topics, and then see the data associated with them.

**Use Case 2: Eddie Cruz**

* New User
* Freshman
* First time away from home in NYC
* Architecture major

Eddie is a city kid through and through. He is used to having plenty to do all around him, everywhere to shop or get food, and a nice deli just a few blocks away. Now that he’s here in Troy, however, everything is new to him. Naturally, being a city kid, he wants to go explore downtown Troy, but, being an Archie, he has no time whatsoever to do so. If he wants to go somewhere good downtown, he’ll need to know exactly where he’s going to make a quick run and get back to the studio. A friend of his who he met at S.O. recommends he try Trend Tracker to see what’s cool around town. Eddie realizes that’s a great idea, and loads the website. He is greeted with a nice bouncy website title, which draws his eyes to the top of the page, where he then sees the tagline. After reading this, and seeing as there is nothing else really relevant on the page, he proceeds to look up “Troy delis”

After submitting his search, Eddie is greeted to the dashboard with a quick message that explains how to navigate around the page. He discovers you can change the time frame, and proceeds to change it to past 3 months instead of 1 month, to get more responses from people who have been here longer than the freshman who just moved in. Eddie has an instagram account, and he browses the app everyday, so he clicks on the Instagram panel. He sees a bunch of snaps of deli storefronts and really good looking food. Mainly, he sees a lot of pictures from a place called Uncle Sam’s Deli, which happens to be just around two blocks away from campus. He also sees one really bad complaint about a place called Jim’s Deli, so he decides he’s gonna stay away from there. Eddie then closes the Instagram panel and goes to the RSS panel. He sees a few stories about Hannah’s, but the headlines all indicate that it just opened, and he’s not really willing to take a gamble during his little free time. He also sees that there had actually just been an armed robbery on the same street as Jim’s Deli, strengthening his conclusion not to head over there.

Now that Eddie has a potential candidate in Uncle Sam’s Deli, he scrolls back up to the search bar and searches for that instead. He notices on the trends graph that searches for Uncle Sam’s Deli have been on the rise recently, so he takes to the twitter panel to find out more. It is there that he finds a bunch of people congratulating #UncleSam’sDeli for winning deli of the year in Troy for the second time in a row. After that, he knew he had a keeper here.