CyberHub Website

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Software Requirements Specification
Version 1

Revision History

Date	Version	Description	Author
04/03/2024	1	This is the SRS document about the cyber security related topics	Binal Dalia Yasmeen Shilbayeh Puja Shah Eka Swamy
04/15/2024	2	Version 2 was downloaded again with the project name updated	Binal Dalia Yasmeen Shilbayeh Puja Shah Eka Swamy
04/28/2024	3	Version 3 was updated with more features regarding accessibility and constraints	Binal Dalia Yasmeen Shilbayeh Puja Shah Eka Swamy
05/07/2024	4	Document was revised with more information regarding the benefits this website will provide to ease current difficulties that users face.	Binal Dalia Yasmeen Shilbayeh Puja Shah Eka Swamy

Software Requirements Specification

1.   Introduction

[Section Description: The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS].

The Software Requirements Specification (SRS) for the CyberHub website encapsulates a visionary platform designed to capture, analyze, and illuminate global conversations on cybersecurity. With a purpose to redefine our engagement with cyber discourse, CyberHub empowers users to navigate and scrutinize Twitter data dynamically. Enabling precision in information extraction, the platform offers insights into trending topics, influential figures, and the ever shifting cybersecurity landscape across the globe. The SRS outlines a user centric interface with features such as account management, customizable profiles, and an Explore page housing trending topics and location based data. CyberHub aims to be a guiding light in the world of cybersecurity, providing valuable insights and intelligence to users navigating the complexities of the digital world.

1.1   Purpose

[Section Description: The purpose of the document is to collect and analyze all assorted ideas that have come up to define the system, its requirements with respect to consumers. Also, we shall predict and sort out how we hope this product will be used in order to gain a better understanding of the project, outline concepts that may be developed later, and document ideas that are being considered, but may be discarded as the product develops.

In short, the purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in software delivery lifecycle (SDLC) processes]

The purpose of the document is to define a system that will be able to capture and analyze public conversations about cyber security and related topics by analyzing twitter data, the platform will provide us with the most popular and trending topics related to cyber security. We shall also look for the most influential people in that area, the platform will offer insights into how cyber security themes change across different nations and locations.

1.2   Scope

This document specifies requirements for a CyberHub website that would allow users to capture conversation about Cybersecurity using this platform.

The application allows registered users to:

- Specify data based on region, date, relevance when extracting tweets
- Filter out tweets based on popularity
- Follow, track and monitor specific cybersecurity accounts and hashtags
- Be able to analyze trending cybersecurity topics in real time
- Users can export tracked data to DOCX, XLSX, PDF, HTML
- Browse through different captures tweets
- Use keywords and hashtags which will regularly update
- Users can bookmark and save tweets , creating a library of favorite tweets for future reference.

Application cannot run offline as it needs connection to a server in order to extract data in real time.

1.3 Definitions, Acronyms, and Abbreviations

CTI	Cyber Threat Intelligence
IAM	Identity Access Management
MDR	Managed Detection and Response
OSING	Open Source Intelligence
SASE	Secure Access Service Edge
SSO	Single Sign-On

2. Overall Description

Our website will have a user account system that allows users to register or log in and offers features like profile customization and password reset. The Explore Page shows trending topics, a location-based data display, and a search bar with filters. Favorite content can be bookmarked by users for later access. Navigation is made easier by the Back to Top feature, while Dark Mode provides automatic switching and customization. The Share Feature and FAQ section improve usability. Trending Now displays the most popular subjects at the moment, while Twitter Account Search makes it possible to find specific accounts. Trending issues and cybersecurity developments are brought about through an alert system. By leaving comments, users have the

ability to join a group and work with a team on a specific interest related to cybersecurity. Currently, users would have to stream through platforms like Twitter and manually type and search each topic they would like to research, however there is no platform that focuses on topics in Cybersecurity and is able to host a specific site that allows users to return in order to see their bookmarked posts and tweets. This will provide ease to users who can organize their bookmarked posts and use this platform solely for the purpose of seeing trends that relate to the topic of Cybersecurtiy.

3. Specific Requirements

The specific requirements are –

3.1 Functionality (i.e., Functional requirements or Product Features)

[This subsection contains the requirements for the software-to-be. These requirements are organized by the features discussed in the Proposal Document]

3.1.1 *Feature 1: User Account*

3.1.1.1 The system shall allow new users to sign up or login to their account using a username and password.

3.1.1.2 The system shall also provide with a "Forgot my password" option in case the user might reset their current password.

3.1.1.3   The system shall allow users the customize their user profile and even find their account information as well as see their bookmarked/favorite tabs

3.1.1.4 Allow new users to register with their First Name, Last Name, Email, Date of Birth

3.1.2 *Feature 2: Explore Page*

3.1.2.1 The system shall have a search bar to prompt users to enter their keyword/hashtag of choice and search further topics using the hashtag and others co-related to it.

3.1.2.2 The system shall have filters when searching to add specifics such as date, relevance, location.

3.1.2.3 The system shall have a "Current Location" system feature that will allow users to give permission for the site to access their current location to provide more data that is based on location.

3.1.2.4 The system shall show the users the most searched topics based on their search history

3.1.2.5 The system shall also showcase all types of tweets including text, video, and audio-based.

3.1.3 Feature 3: Bookmarking and Favorites

3.1.3.1   The system shall allow users to bookmark tweets or topics of interest for future reference

3.1.3.2   The system shall create personalized libraries of favorite content

3.1.4 Feature 4: Back to the top feature .

3.1.4.1   The system shall have a hover effect on the back to the top feature when the user hover the cursor over it.

3.1.4.2   The system shall visibility feature where the user has scroll down the page to the certain distance than after they can see the back to top button

3.1.4.3   The system shall position the button to wherever the user wants for ex-bottom right or bottom left or on top.

3.1.5 Feature 5: Dark Mode

3.1.5.1   The system shall have customization options with preview, allowing users to adjust settings such as contrast levels, background colors and text colors to suit individual preferences.

3.1.5.2   The system shall transition between light and dark modes smoothly, maintaining user experience without abrupt changes.

3.1.5.3   The system shall have a scheduler that allows users to set specific times for automatic dark mode activation and deactivation.

3.1.6 Feature 6: Premium Feature

3.1.6.1   The system shall present a premium option that allows the user to view more data when they search their topic

3.1.6.2   The system shall offer this option for a price, and it will have more accessibility into the site.

3.1.6.3   The system shall allow users to upgrade their account from basic to premium if they would like to access more features and data at any point of their account being active.

3.1.7 Feature 7: FAQ Feature

3.1.7.1   The system shall have a FAQ feature that allows users to view the Frequently-Asked Questions about the site, navigation, and overall usability.

3.1.7.2   The system shall have a Feedback Button as well that will allow users to write down any suggestions they wish to send back to the developer.

3.1.8 *Feature 8: Share Feature*

3.1.8.1   The system shall allow users to share the topic pages and data searches through messaging, email and saving it as a pdf to share

3.1.8.2   The system shall allow users to post their findings on different social platforms such as Instagram, Facebook, Twitter, and Linkedin.

3.1.9 *Feature 9: Twitter Account Search*

3.1.9.1   The system shall allow the users to search for specific Twitter accounts related to their topic of choice

3.1.9.2   The system shall allow users to view the account of the tweets/data the website pulls.

3.1.10 *Feature 10: Trending Now*

3.1.10.1 The system shall be a separate page from the Explore page and will have its own purpose

3.1.10.2 The system shall allow users to view the most trending topics on this page and see what is currently trending around the world

3.1.10.3 The system shall also allow users to view the "Trending Now" page based on region, language, date and other attributes.

3.1.10.4 The system shall allow users to see the current date's top ten trending topics however it also allows the users to see the past week's list of trending topics as well.

3.1.11 *Feature 11: Twitter User Authentication*

3.1.11.1 The system shall allow users to sign into their Twitter Accounts and link it with CyberHub

3.1.11.2 The system shall allow users to share and post their tweet of choice within their Twitter account.

3.1.11.3 The system shall allow users to integrate their Twitter accounts to CyberHub allowing the site to analyze the user's search history and give search suggestions about the cyber world.

3.1.12 *Feature 12: Alert System*

3.1.12.1 The system shall showcase the most cybersecurity of that specific day on the homepage once they log in.

3.1.12.2 The system shall send an alert via their signup email about their bookmarked tweet that is currently trending.

3.1.12.3 The system shall show the most liked tweet related to the hashtag/topic that is

currently trending.

3.1.13 Feature 13: Interaction between users

3.1.13.1 The system shall allow users to comment on their selected tweets and create conversations within the website.

3.1.13.2 The system shall give the option to the user once they comment to join a group related to the tweet's topic.

3.1.13.3 The system shall allow users that are part of a group to collaborate together on future projects based on the topic.

3.1.14 Feature 14: Cybersecurity Help Center

3.1.14.1 The system shall display information about being protected against cybersecurity attacks and provide contact information for further help.

3.1.14.2 The system shall give suggestions about technical support and troubleshooting assistance for cybersecurity-related issues such as firewall configuration, antivirus software installation, network security setup, and software patch management.

3.1.14.3 The system shall provide guidance on how to report cybersecurity incidents to appropriate authorities, regulatory agencies, and law enforcement agencies if the incident is threatening.

3.2 Usability

3.2.1 Graphical User Interface

The user interface shall provide a well-organized layout that guides users through the content logically and minimizes clutter while also having easy navigation that allows users to switch from one tab to another seamlessly.

The user interface shall incorporate high-quality images, videos, icons, and graphics to enhance the visual appeal and convey information effectively.

The user interface shall use visual cues to prioritize and guide users through the interface.

The user interface design shall maintain a consistent color scheme, typography, and layout throughout the platform to ensure consistency and provide a visually appealing interface

3.2.2 Accessibility

The system shall implement accessibility features such as alt text for images, keyboard navigation, and high-contrast modes to ensure inclusivity and compliance with accessibility standards.

The system shall ensure that the website adapts seamlessly to different screen sizes and devices, providing a consistent user experience.

3.3   Reliability & Availability

The system shall allow the website to be scalable, allowing it to handle increasing traffic and workload by dynamically allocating resources or adding additional server capacity as needed.

The system shall Perform regular maintenance tasks, including software updates, security patches, and performance optimizations, to keep the website running smoothly and mitigate potential vulnerabilities.

The system shall regularly back up user data and implement robust data recovery procedures to minimize data loss in case of unexpected incidents

3.4   Performance

The system shall implement tools and services to monitor website performance, including page load times, server response times, and other key metrics. Regular monitoring allows for timely identification and resolution of performance issues.

The system shall conduct regular load testing to simulate high traffic scenarios and identify potential performance bottlenecks.

3.5   Security

3.5.1   Data Transfer

The system shall use encryption to safely extract the tweets and display them on the website.

The system shall Offer Two-Factor Authentication as an additional layer of security for user accounts, preventing unauthorized access and safely connecting the user's Twitter account to the site.

3.6   Design Constraints

3.6.1   Development Tools

The system will be built using Figma for the prototype and use HTML, Java, and PHP for the website development. The system will also require the use of SQL to manage the data.

3.6.2   *System Type*

The system will be a web-based system.