Software Requirements Specification for Sentiment Analysis and Report

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Team Scrumptious

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Revision History

Name	Date	Description	Version
Team Scrumptious	20/09/21	This version of the SRS document has been drafted with all the current requirements being incorporated into this document.	1.0

Introduction:

Purpose:

The purpose of this document is to provide a detailed overview of the project being developed; the document will mainly cover about:

- What the product is mainly intended for and a few features
- What the product is mainly going to work on
- How the product should respond to any operational requests

This document will help understand the main goal behind the project and give the reader a general idea on the project. This document will help cover the software aspect for developers and also for the end user of the product.

Product Scope:

The product is a web based application which will help simplify the data analysis and report generation process. The product would help the client:

- Accurately predicts if the comment written lies under the positive or negative or neutral class.
- Provides Breakdown of the reviews under the different classes and the keywords.
- Outputs a report to help the business understand and improve their user satisfaction.

The Sentiment Analysis uses machine learning algorithms to help simplify the process of analyzing and generating reports for the companies wanting to know the status of their product. Helps allocate

human resources for other tasks more efficiently for the client in their product development cycle.

Intended Audience:

This document is mainly for:

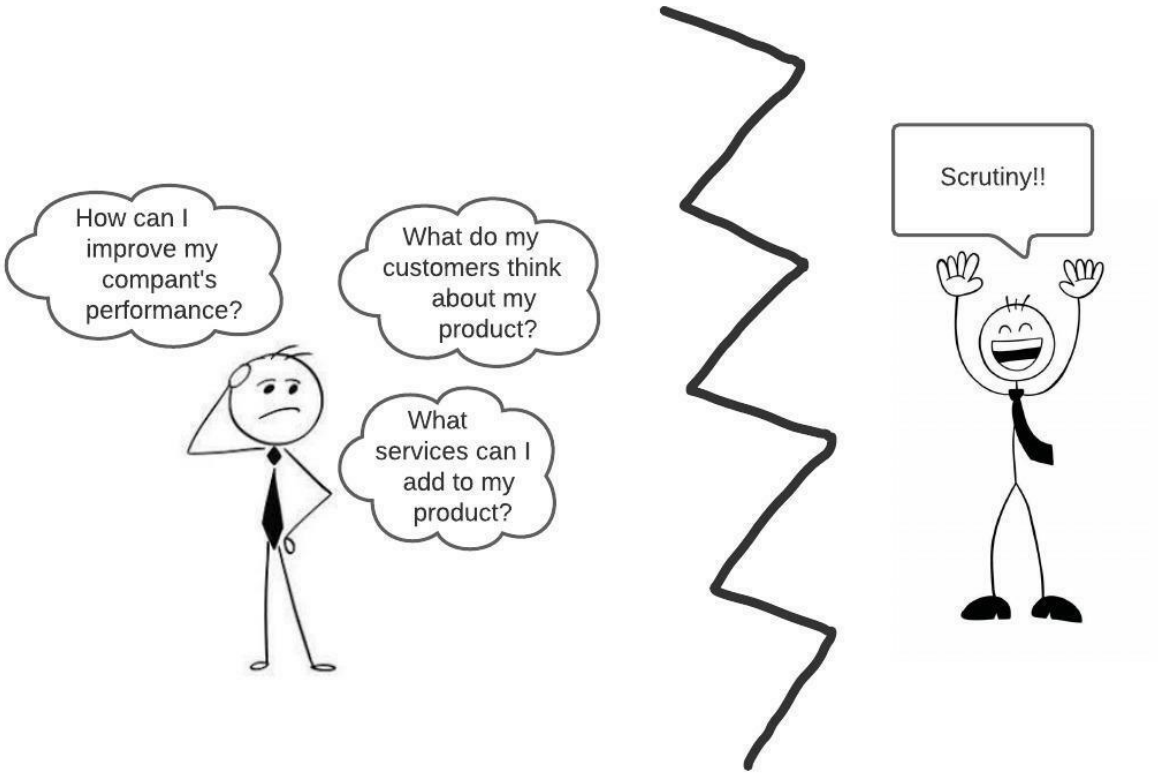
- Software engineers who are going to further develop this project
- Developers for the programming aspect
- Client/end user side, to give a brief rundown on how the whole thing will happen
- Professor who will review the document for the assigned project

References:

- www.Kaggle.com
- https://www.researchgate.net/publication/344013948_Sentiment_Analysis_on_Youtube_Comments_A_brief_study
- https://www.researchgate.net/publication/344869545_Sentiment_Analysis_on_Amazon_reviews
- https://ijece.iaescore.com/index.php/IJECE/article/view/22285
- https://towardsdatascience.com/sentiment-analysis-on-amazon-reviews-45cd169447ac
- https://mickzhang.com/amazon-reviews-using-sentiment-analysis

Overall Description:

Product Perspective:



The purpose of this product is to ease the task of analyzing data and creating a report which is simply a waste of human resources, rather they can optimize and assign people to work in the other sectors of the company to help develop the product in other ways. The product service here will help analyze data (reviews/comments) and generate reports at ease. Be it a big time company or a small business looking to hop on the market trying to find out the new trend, this will help ease the hassle of figuring out what best should be worked on.

The user wanting to use this will have a simplistic and easy to understand UI that will help in easy navigation around the service provided for any customizations or settings to be checked on.

Product Functions:

Few of the functionalities that the product has are:

- Able to provide a simplistic , easy to operate view for the user
- Analyze and predict the type/class of the comment
- Breakdown the reviews under different classes and keywords
- Generate a report for the client for better understanding on their product

User Classes and Characteristics:

The various users who will be using this product service will be:

- MNC marketing strategists
- Small startup company owners
- Single time clients

1.	Professional marketing analyst	These clients are well versed in the in this field of a product's life cycle where they have a lot of experience and a good skill set
2.	Small shop business owner	These clients are just starting out and have very less to almost no prior experience on how to expect and keep up with the current market
3.	Temp clients	These clients ones who need analysis and report work only of a specific reason and don't want to get into the nitty gritty all the data analysis

It is to be noted that none of the people mentioned above know the technical aspect of the product being developed.

Operating environment:

The product software is designed to work on Windows, Linux based operating systems and also the MAC platform, since they all support web based applications like Chrome, Firefox, Brave, etc since they all support HTML and our product is also web based.

Design and Implementation Constraints:

The plan is to try to make it as automated as possible by using the latest Machine learning techniques, but as of initial stages try to keep as less user interaction. Implementation of the project is not in full execution as of now. We will try to be as standardized as we can which will help give it a common ground for people from all platforms to interact with.

Assumptions and Dependencies:

We assume that the client using our product has a general idea on how to use browser based applications. It is assumed that the browser that will be used is going to be Google Chrome, Mozilla Firefox, and Safari for MAC as these are some of the most standard browsers used and at the latest version.

Specific Requirements:

External Interface Requirements:

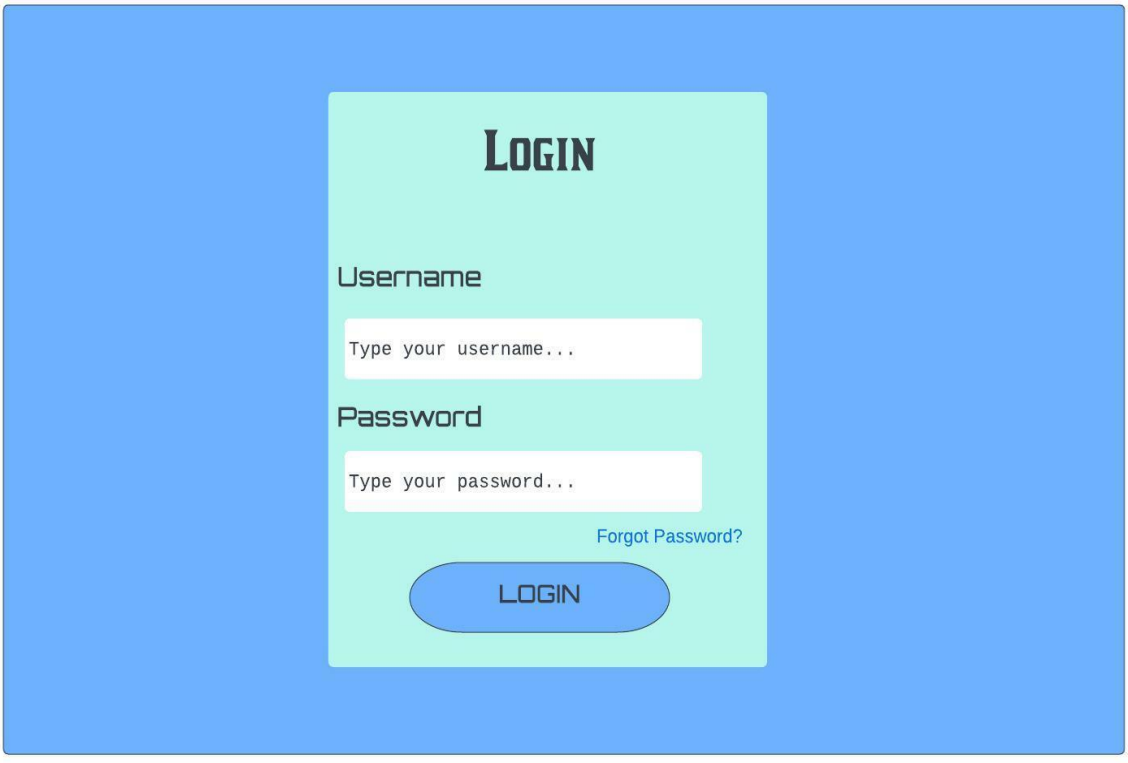
1. User Interfaces:

The user interface design is simple and clear. In this software, Scrutiny an individual can create a new account to get access to the website.

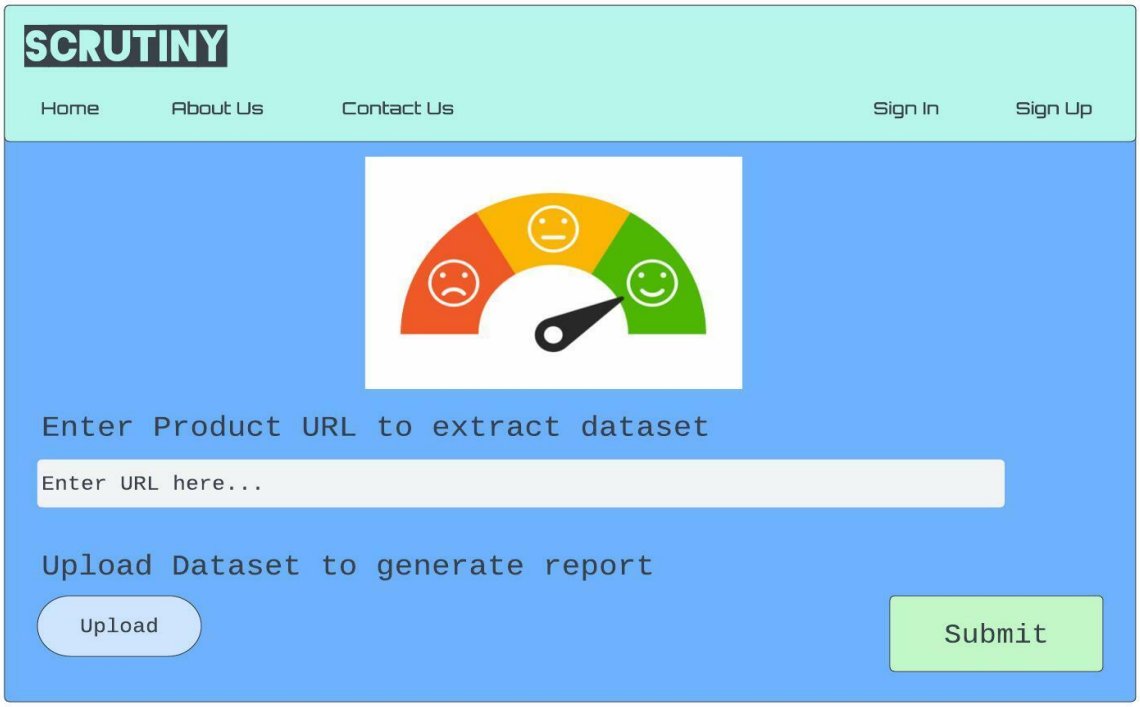
There will be a homepage where the user can paste the URL of any product link to get a CSV of the review data for that product. Additionally, the user can also upload the CSV file obtained or already owned and receive a report on the sentiment analysis on the reviews.

Sample Screenshots:

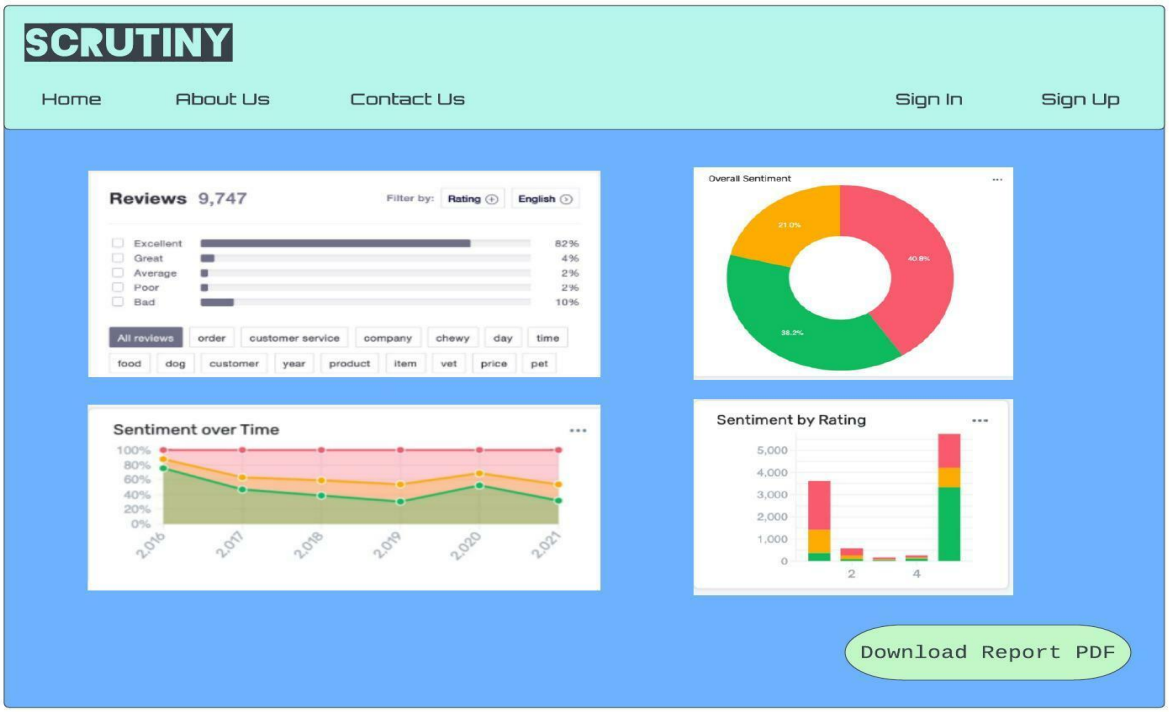
Login Page:



Home Page:



Report Page:



2. Hardware Interfaces:

Not applicable for our project.

3. Software Interfaces:

This software can run on Windows OS, Mac and Linux

4. Communication Interfaces:

A web browser is necessary to run the software

Functional Requirements:

Our product Scrutiny can be used to generate a detailed report on any comment dataset provided to it

- Comment class Prediction

Our product will be accurately able to predict whether a review/comment written lies under the positive, negative or the neutral class.

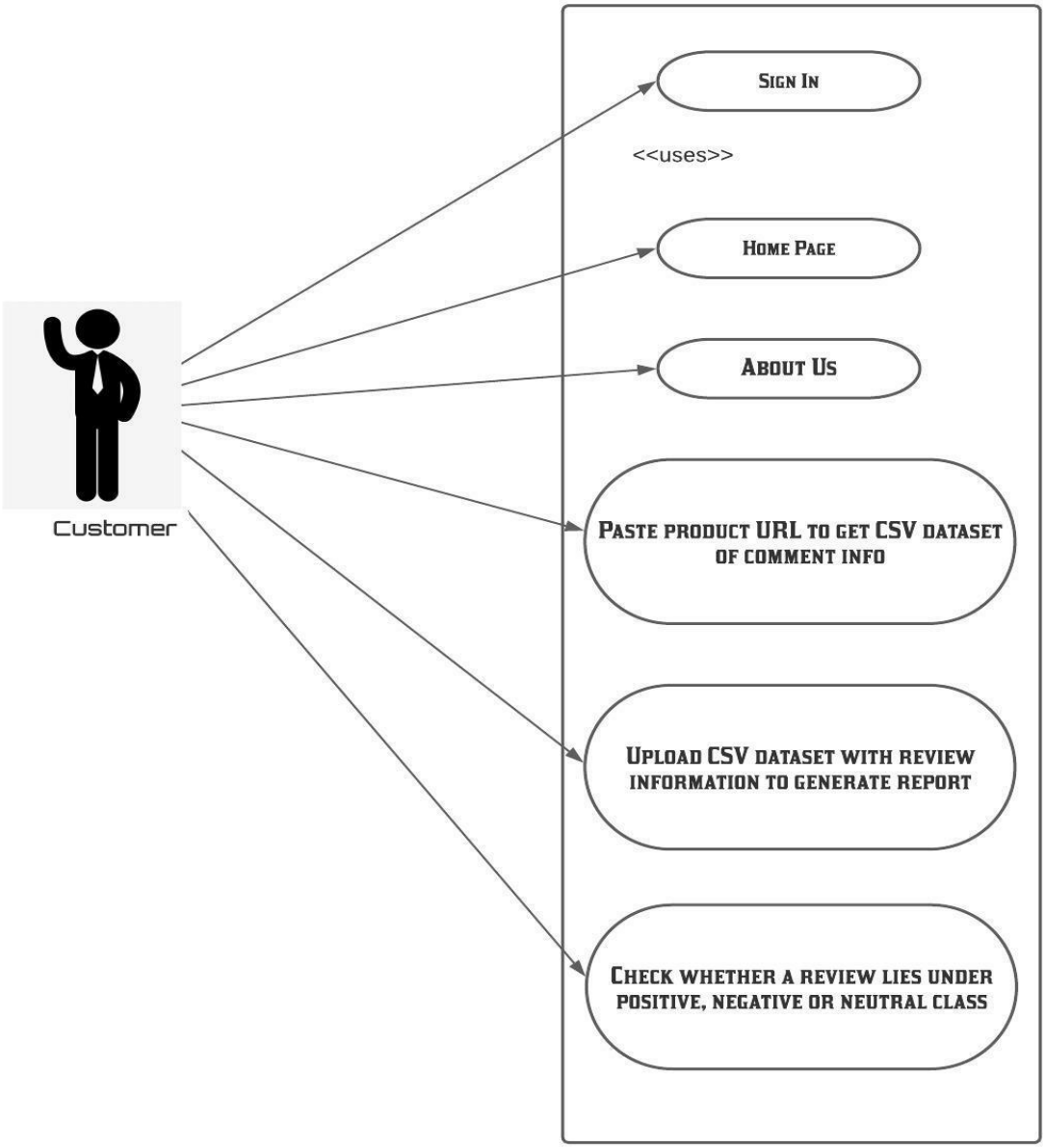
- Review Breakdown

Our product will provide a detailed breakdown of the reviews under different classes along with the important keywords.

- Report Generation

Our product will generate a detailed report on the comments/reviews for the product and help the business understand its flaws and help improve customer satisfaction.

Use Case View:



Non-Functional Requirements:

- Performance requirements:
    - It will be able to handle multiple users
    - It will be accessible to people from all around the globe
    - Any task/service being run by the product will have a really less time of execution
- Safety requirements:
    - All the user login data will be secure

Appendix A

SRS	SRS stands for Software Requirement Specification. It is used to refer to a document that completely describes all of the functions of a proposed system and the constraints under which it must operate.
UI	UI stands for User Interface. It is defined as the space where interaction between humans and machines occurs.
View	View means the display or look of the data on the screen
MNC	MNC stands for MultiNational Company
HTML	HTML stands for HyperText Markup Language, this is used to code all the websites
CSV	CSV stands for Comma Separated Values, it is a file type used to store statistical data