USER-REVIEW SENTIMENT ANALYSIS

UCS503 Software Engineering Project Report

End-Semester Evaluation

Submitted by:

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BE Third Year, COE

Group No: 3COE7

Submitted to

Kanupriya

Teaching Assistant

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TIET, Patiala

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TABLE OF CONTENTS

UCS 503- Software Engineering Lab

Dated:15th August 2023

Team Name: YADI-4
Team ID (will be assigned by Instructor):

Please enter the names of your Preferred Team Members.

- You are required to form three to four-person teams.
- Choose your team members wisely. You will not be allowed to change teams.

Name	Roll No	Project Experience	Programming Language
Iqman Singh Bhatia	102103189	Chess Engine, Meal Catalog App	C, Cpp, Python, R, Dart
Aadil Garg	102103198	News Classification, Computer Vision	C, Cpp, Python, R
Yashmit Kapoor	102103182	News Classification, IP Network Scanner	C, Cpp, Python, C#
Dheeraj Arora	102103508	Stock Market Prediction, Music Library Database System	C, Cpp, Python

Programming Language / Environment Experience

List the languages you are most comfortable developing in, as a team, in your order of preference. Many of the projects involve Java or C/C++ programming.

1. Python
2. Dart

3. C, Cpp

Choices of Projects:

Please select 4 projects your team would like to work on, by order of preference:

First Choice	**User-Review Sentiment Analysis Webapp** We propose developing a User-Review Sentiment Analysis Webapp to empower businesses to comprehend customer feedback effectively. Leveraging natural language processing techniques, this platform will analyze sentiments expressed in user reviews, providing insightful sentiment categorization and sentiment score metrics. The web application will offer an intuitive interface, enabling businesses to input text-based reviews and receive instant sentiment analysis results. Our goal is to assist companies in understanding customer sentiments, enhancing decision-making, and refining product/service strategies based on comprehensive sentiment insights. This project aims to deliver a user-friendly, efficient, and valuable tool for businesses seeking to harness the power of user feedback.
Second Choice	**Illegal/Harmful Object Detection Webapp** We propose the development of an Illegal/Harmful Object Detection Webapp aimed at enhancing safety and security measures. This application will employ advanced image recognition algorithms to swiftly identify and flag potential threats in real-time, aiding law enforcement agencies, security personnel, and public safety initiatives. The webapp will utilize machine learning models to analyze uploaded images, swiftly detecting illegal or harmful items, thereby enabling proactive measures for threat mitigation. This project aligns with the critical need for technological solutions to safeguard public spaces, ensuring a safer environment for communities worldwide.
Third Choice	**Human Emotion Recognition Webapp** We propose the development of a Human Emotion Recognition Web Application aiming to enhance user experience and engagement. Leveraging advanced machine learning algorithms, this app will accurately detect and interpret facial expressions, enabling seamless emotion identification in real-time. Users can upload images or utilize their device's camera for instant analysis. Our project emphasizes accessibility, ensuring compatibility across multiple devices and browsers. The application will offer a user-friendly interface, fostering widespread adoption and usability. Through this project, we aim to deliver a sophisticated yet intuitive tool that enriches human-computer interaction and supports various applications in psychology, marketing, and beyond.

2. Planning Phase:

2.1 Project Write-up

The User Sentiment Analysis Web Application is designed to offer a comprehensive sentiment analysis of user reviews. Utilizing both a classification model for binary positive/negative classification and a regression model for assigning a score out of 5, the application aims to provide nuanced insights into user sentiments.
In response to the increasing reliance on user feedback, this project addresses the need for a sophisticated sentiment analysis tool. By combining a classification model and a regression model, the application enhances the depth of sentiment interpretation, catering to both qualitative and quantitative aspects of user reviews.

The software should be able to perform the following operations:

- **Input Text: Accept user-provided text, such as product or service reviews, through a user-friendly web interface.**
- **Binary Sentiment Classification: Utilize a pre-trained classification machine learning model (Flair's TextClassifier) to classify the sentiment of the input text as either positive or negative.**
- **Numerical Sentiment Scoring: Implement a regression machine learning model to assign a numerical score out of 5 to the input text, providing a more granular representation of sentiment intensity.**
- **Display Results: Present the results of sentiment analysis to the user in a clear and understandable format on the web interface.**

2.2 Feasibility Report

2.2.1 Technical Feasibility

Data Collection and Processing:
Real product reviews are accessible through various online platforms like kaggle and APIs, ensuring a diverse dataset for training and testing.
Machine Learning Models:
Flair's TextClassifier and regression models are proven in sentiment analysis tasks, with established success in various natural language processing applications.
Web Development:
Streamlit is a robust and widely used Python library for developing interactive web applications with minimal effort.

2.2.2 Economic Feasibility

Budget:
The costs involve acquiring and processing data, training machine learning models, and deploying the web application. Open-source tools and datasets can minimize expenses.
ROI:
The potential return on investment lies in providing businesses with valuable insights into user sentiments, leading to improved decision-making and customer satisfaction.

2.2.3 Resource Feasibility

Human Resources:
Skilled individuals in machine learning, web development, and project management are available in-house.
Infrastructure:
Standard computing infrastructure and cloud services are commonly available for model training, hosting, and web deployment.

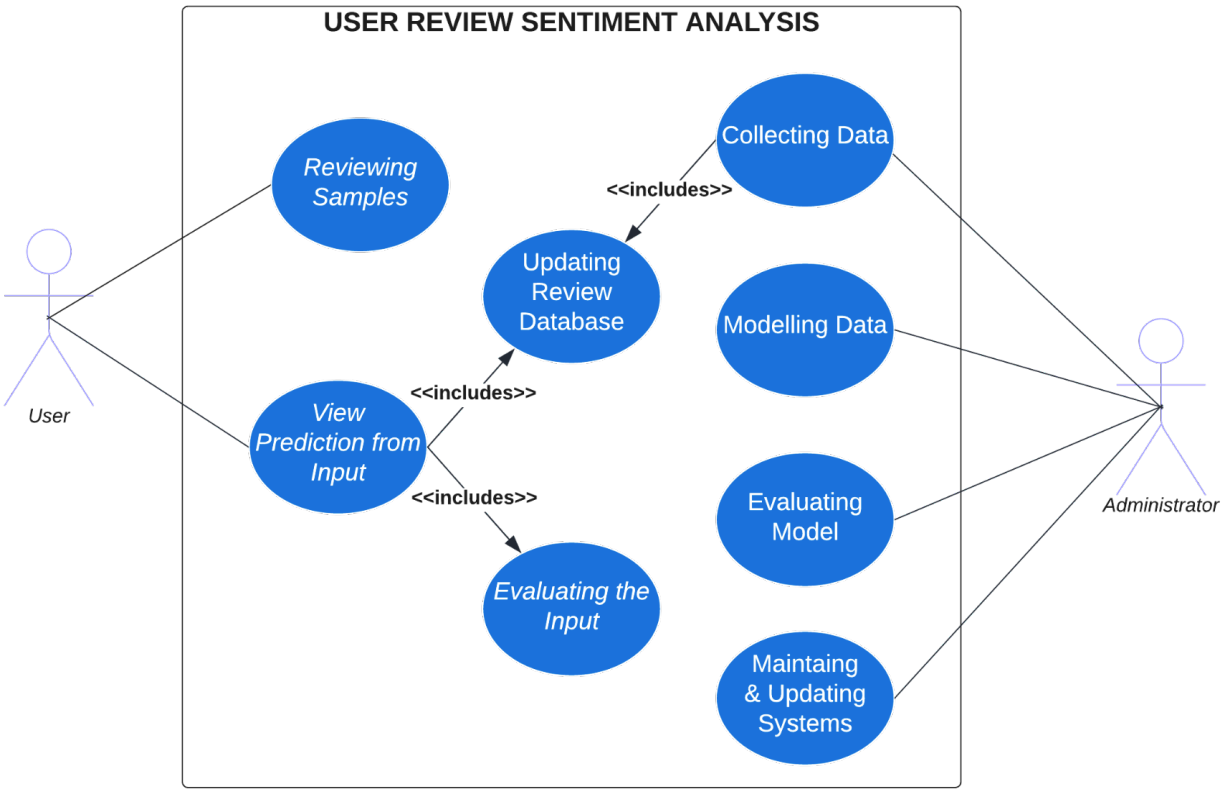
2.2.4 Legal Feasibility

Data Privacy and Compliance:
Adherence to data protection regulations (e.g., GDPR) can be ensured by anonymising and securing user data.
Intellectual Property:
Use of pre-trained models and open-source tools minimises intellectual property concerns. Ensuring compliance with licensing agreements.

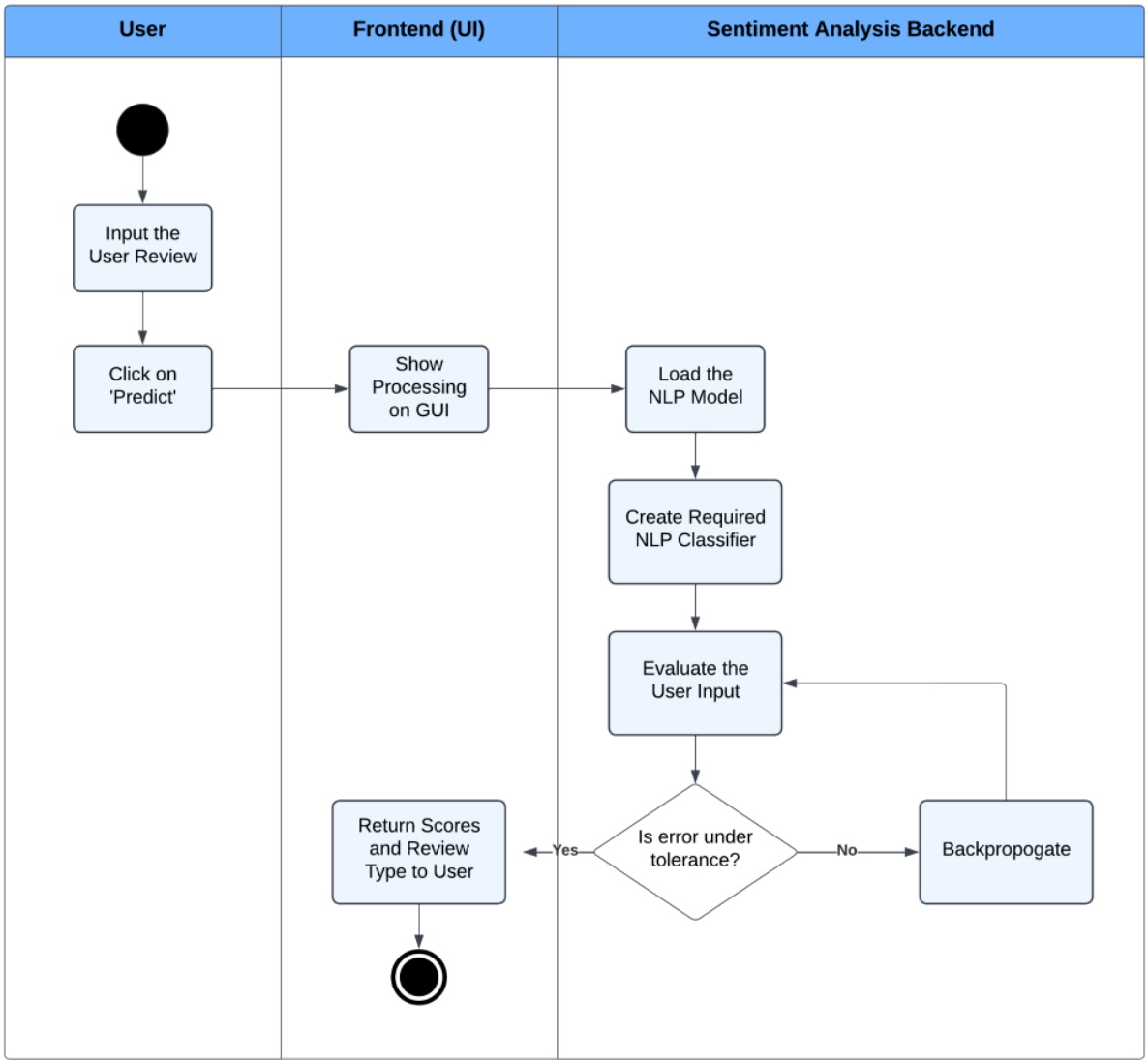
2.3 Gantt Chart

3. Analysis Phase

Use-Case Diagram

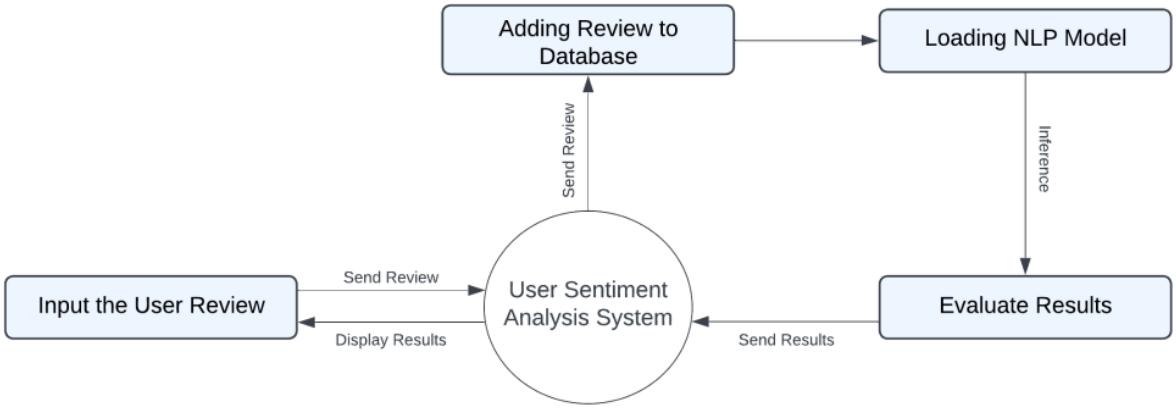


Swimlane Diagram

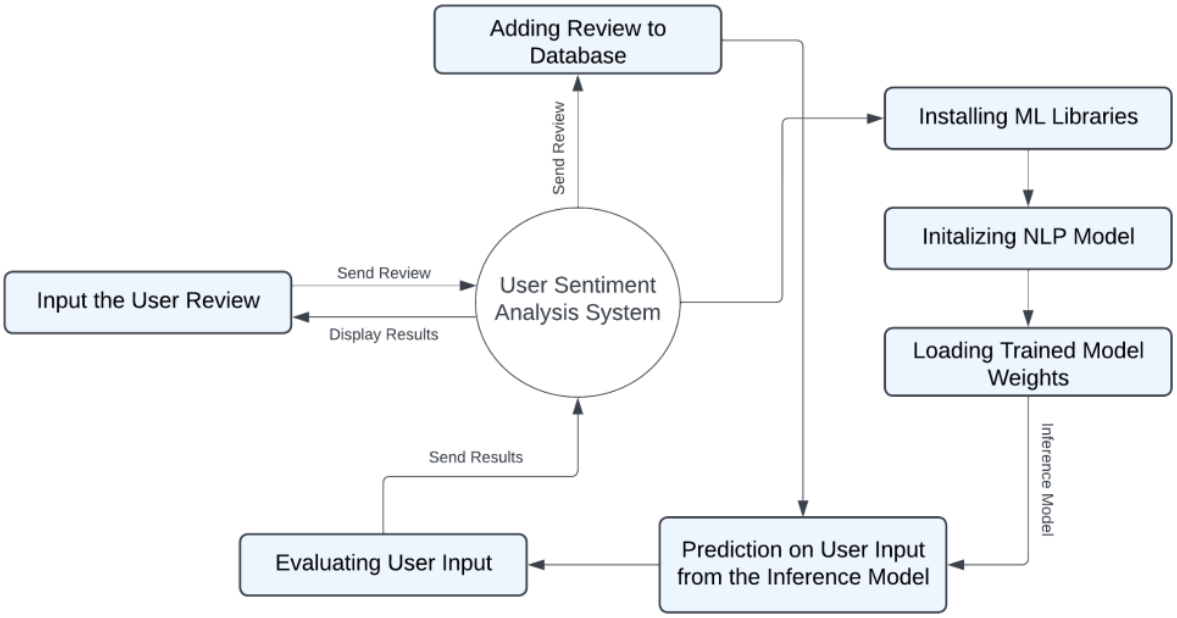


DFD Level 0:

DFD Level 1:



DFD Level 2:


Adding Review to Database
Send Review
Installing ML Libraries
Initalizing NLP Model
Loading Trained Model Weights
Inference Model
Input the User Review
Send Review
Display Results
User Sentiment Analysis System
Send Results
Evaluating User Input
Prediction on User Input from the Inference Model

A CASE STUDY IEEE FORMAT

Software Requirements Specification Document

Version 1.0

USER-REVIEW SENTIMENT ANALYSIS

Table of Contents

1. Introduction

1.1 Purpose of this document

This Software Requirements Specification (SRS) document aims to serve as a guiding blueprint for the development of a User-Review Sentiment Analysis Web Application. It outlines the functional and non-functional requirements, system constraints, and interfaces crucial for the successful implementation of the project.

1.2 Scope of development of project

The project scope encompasses the design and development of a web-based platform capable of extracting, analyzing, and visualizing sentiments from user reviews gathered across various platforms (websites, social media, etc.). It will provide businesses with actionable insights derived from sentiment analysis, enhancing their understanding of customer feedback. The primary objectives include

1. **Historical Data Retrieval and Processing:** The system will train on gathered user-generated reviews and feedback from diverse sources, ensuring data accuracy and consistency. It will undergo preprocessing and cleansing to prepare the data for sentiment analysis.
2. **Sentiment Analysis Model Integration:** Integration of sentiment analysis algorithms, including Natural Language Processing (NLP) techniques, to interpret and classify sentiments within user reviews effectively.
3. **User-Friendly Interface:** Development of an intuitive and accessible interface that allows users to input various review parameters for analysis. The interface will display sentiment analysis results in a user-friendly format, facilitating easy comprehension of sentiment trends.
4. **Visualization of Trends:** Implementation of visual tools such as charts and graphs to represent sentiment trends over time. This feature aids users in understanding evolving sentiment patterns and making informed decisions based on these insights.
5. **Evaluation Metrics for Sentiment Analysis:** The system will assess sentiment analysis performance using metrics like accuracy, precision and recall. Users will have access to these metrics, enabling them to measure the reliability and effectiveness of the results.

For this system to function optimally:

- Users should have reliable internet connectivity to access external sources for user reviews.
- The system's functionality may be influenced by the compatibility and updates of third-party sentiment analysis libraries and data visualization tools. Any changes or updates to these dependencies might impact the system's performance and functionality.

1.3 Abbreviations and Acronyms

Table 1 gives the full form of the most commonly used mnemonics in this SRS document.

S. No.	Mnemonic	Full Form
1.	ML	Machine Learning
2.	NLP	Natural Language Processing
3.	UI	User-Interface
4.	GUI	Graphical User-Interface
5.	SRS	Software Requirements Specification
6.	ER	Entity-Relationship

1.4 Overview

The remaining sections of this document provide a general description, covering details about the users of this project, the hardware specifications of the product, and the functional and data needs. In section 2, we delve into a broad overview of the project, detailing functional requirements, data needs, constraints, and assumptions made during the design of the multi-utility system. This section also provides a user's perspective on how the product will be used. Moving to section 3, we explore the specific requirements of the product. Section 3.0 further delves into external interface requirements and provides a detailed explanation of the functional requirements.

2. Overall Description

2.1 Product Perspective

The User-Review Sentiment Analysis System is conceived as a standalone software application, dedicated to aiding analysts and researchers in comprehending user reviews and predicting sentiment trends. It offers an intuitive interface that integrates machine learning algorithms, enhancing the accuracy of sentiment analysis.

Features:

1. **User-Generated Data Analysis**: The system retrieves user-generated reviews from various sources, ensuring accuracy and relevance. It undergoes preprocessing to prepare the data for machine learning analysis.
2. **Integration of Sentiment Analysis Models**: Various sentiment analysis algorithms, including natural language processing (NLP) techniques, are integrated. This enables the system to learn patterns and predict sentiment trends from user reviews.
3. **User Interface for Input and Output**: An intuitive interface allows users to input review parameters for analysis. Additionally, it displays predicted sentiment trends, aiding in user interaction and decision-making.
4. **Visualization of Sentiment Trends**: The system generates visual representations like graphs and charts, illustrating historical and predicted sentiment trends. This assists analysts in understanding sentiment predictions.
5. **Performance Evaluation Metrics**: Incorporation of metrics such as accuracy, precision and recall to assess the reliability and effectiveness of sentiment predictions.
6. **Software Integration**: Interaction with external libraries and tools for sentiment analysis. Compatibility specifications with these libraries will be outlined in the system documentation.
7. **External System Interfaces**: Primary interfaces involve retrieving user reviews from external sources, potentially using APIs or databases for data access.
8. **User-Friendly Interfaces**: Intuitive GUIs cater to analysts and administrators, facilitating input, prediction viewing, and model performance assessment through visualizations.
9. **System Independence**: The system operates independently without direct connections to external trading systems. However, it may rely on external sources for user review data.
10. **API Compatibility:** Ensuring compatibility with various APIs for data retrieval, allowing seamless integration with different platforms or sources of user reviews.
11. **Scalability and Performance:** Designing the system to be scalable and capable of handling large volumes of user reviews without compromising performance, ensuring efficient sentiment analysis even during peak usage.
12. **Data Security Measures:** Implementing robust data encryption and security protocols to safeguard sensitive user review data, ensuring compliance with privacy regulations and protecting user information.
13. **Hardware Compatibility**: Designed to function on standard hardware configurations to ensure compatibility across devices. Specific requirements will be detailed in the system documentation.

2.2 Product Functions

The product should be able to perform the following operations:

1. Historical Data Retrieval and Processing
2. Sentiment Analysis Model Integration
3. User-Friendly Interface
4. Visualization of Trends
5. Evaluation Metrics for Sentiment Analysis

2.3 User Characteristics

Administrator: Responsible for data gathering, processing and modelling along with system configuration and maintenance.
User: Utilizes the system to make predictions on input reviews.

2.4 General Constraints

Several constraints may influence the development and operation of the User-Review Sentiment Analysis System:

1. Data Availability: The accuracy and reliability of sentiment predictions rely on the availability and quality of historical user-review data sourced from external platforms.
2. Algorithmic Limitations: The effectiveness of sentiment analysis predictions is subject to the capabilities and limitations of the employed algorithms. While striving to integrate cutting-edge algorithms, the system acknowledges inherent algorithmic constraints.
3. User Proficiency: The system assumes a foundational understanding of user reviews, sentiment analysis concepts, and basic data interpretation skills among its users, especially analysts. Training materials will be provided to bridge potential knowledge gaps.

2.5 Assumptions and Dependencies

To ensure seamless functionality and operation of the User-Review Sentiment Analysis System, specific assumptions and dependencies are acknowledged:

- **Stable Internet Connectivity**: Users are assumed to have consistent access to a stable internet connection for retrieving external user-review data crucial for analysis.
- **Reliance on Third-Party Tools**: The system is reliant on external machine learning libraries and data visualization tools. Any compatibility issues or updates pertaining to

these dependencies may impact the system's functionality and performance. Regular assessments of these dependencies will be crucial for system reliability

2.6 Apportioning of Requirements

To facilitate a systematic approach to development and implementation, certain requirements will be segmented for prioritized attention at different stages:

- Enable administrators to customize system settings according to specific needs and preferences.
- Prioritize the accuracy and reliability of evaluation metrics calculation to ensure robust and dependable sentiment analysis results.
- Focus on enhancing rendering capabilities for visualizations, ensuring seamless and efficient display to enhance user interaction and comprehension.

3. Specific Requirements

3.1 External Interface Requirements

External interface requirements define the interactions between the software and external entities, such as users, external APIs, and other systems. These requirements detail how the system will send and receive data, integrate with external services, and ensure compatibility with various interfaces.
The following list presents the external interface requirements:

- The product requires limited graphics usage to provide a graphical user interface (GUI) accessible via web browsers
- The product requires a simple device with an internet connection and keypad to take the user input.
- The product does not require the usage of sound or animation.
- The system shall have storage for a database to store historical stock data & user preferences.
- The system shall be compatible with major operating systems (Windows, macOS, Linux).
- The system shall comply with financial regulations regarding data privacy and security

3.2 Detailed Description of Functional Requirements

The Detailed Description of Functional Requirements provides a thorough explanation of the specific functionalities that the User-Review Sentiment Analysis System must deliver. These

requirements detail the actions the system must perform and the specific features it must include to meet user needs. Here are detailed descriptions of some functional requirements:

3.2.1 Functional Requirements for User-Review Historical Data:

- **Requirement:** The system shall retrieve user-generated reviews from designated external sources.
- **Description:** By establishing secure connections to diverse user review platforms through APIs, users can select specific review sources and timeframes for data retrieval.
- **Requirement:** The system shall perform data preprocessing to handle missing or inaccurate data within user reviews.
- **Description:** Employing advanced algorithms, the system will identify and rectify missing or erroneous data points, ensuring the quality and reliability of the data used for sentiment analysis.

3.2.2 Functional Requirements for Sentiment Prediction Models:

- **Requirement:** Implement various sentiment analysis algorithms, including natural language processing (NLP) techniques.
- **Description:** The software will integrate state-of-the-art sentiment analysis algorithms, offering users multiple options for accurately predicting sentiment trends within user reviews.
- **Requirement:** Users shall have the flexibility to select and customize different sentiment analysis models.
- **Description:** Providing users with the liberty to choose from a range of available sentiment analysis models and tailor parameters to suit specific analysis needs or preferences.

3.2.3 Functional Requirements for User Interface Design:

- **Requirement:** The system shall feature an intuitive graphical interface presenting historical trends and predicted sentiment insights.
- **Description:** Through a visually intuitive dashboard equipped with interactive charts, users can effortlessly visualize historical sentiment trends and predicted outcomes.
- **Requirement:** Users shall interact with the system through a user-friendly interface requiring no advanced technical skills.
- **Description:** The interface will incorporate user-friendly controls, empowering users to input preferences, navigate data, and interpret sentiment predictions without technical expertise.

3.2.4 Functional Requirements for Performance Optimization:

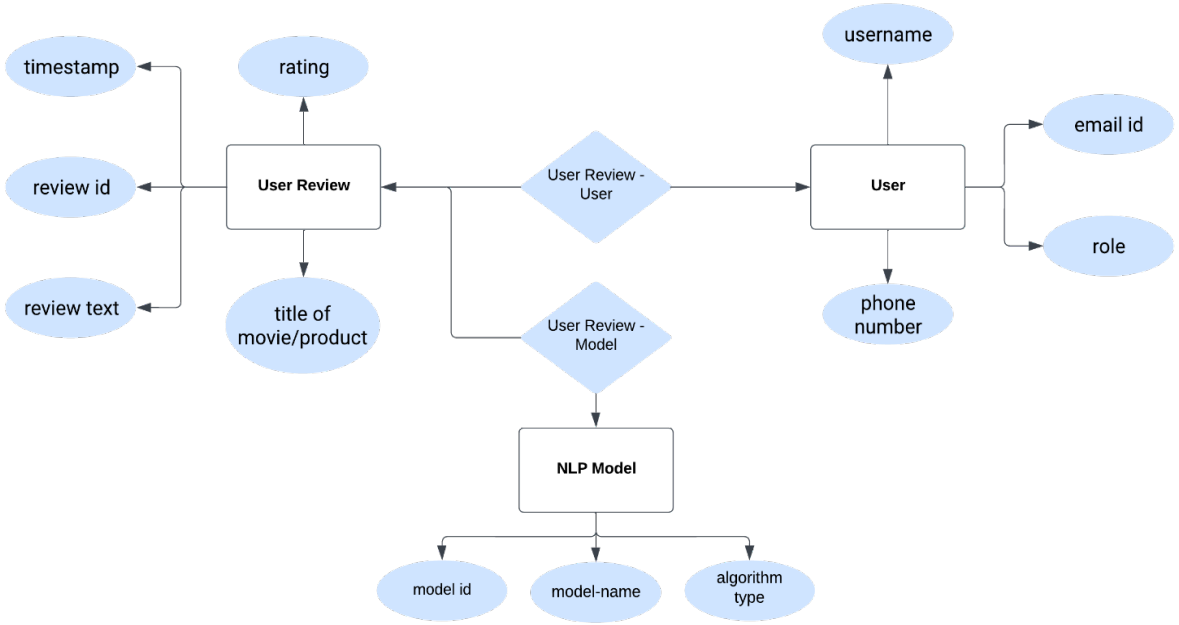
- **Requirement:** The system shall efficiently process and analyze user reviews within a reasonable time frame.
- **Description:** Leveraging optimized algorithms and data processing techniques, the system ensures swift analysis, providing users with timely sentiment insights.
- **Requirement:** Efficient training of sentiment analysis models with user review data.
- **Description:** Employing optimization strategies to minimize model training time, enabling users to efficiently experiment with various sentiment analysis models.

3.3 Performance Requirements

- The software is primarily designed for laptops/desktops to input user-reviews for sentiment analysis.
- The software will support simultaneous user access(UA) as per the server capacity.
- Visual information is also handled by the software.
- The software utilizes NLP algorithms for accurate analysis and requires appropriate resources.
- Under normal conditions, the input user-reviews will return its score along with either a 'Positive' or 'Negative' Sentiment for the input.

3.4 Logical Database Requirements

The following figure shows the E-R diagram for the entire system.



4. Change History

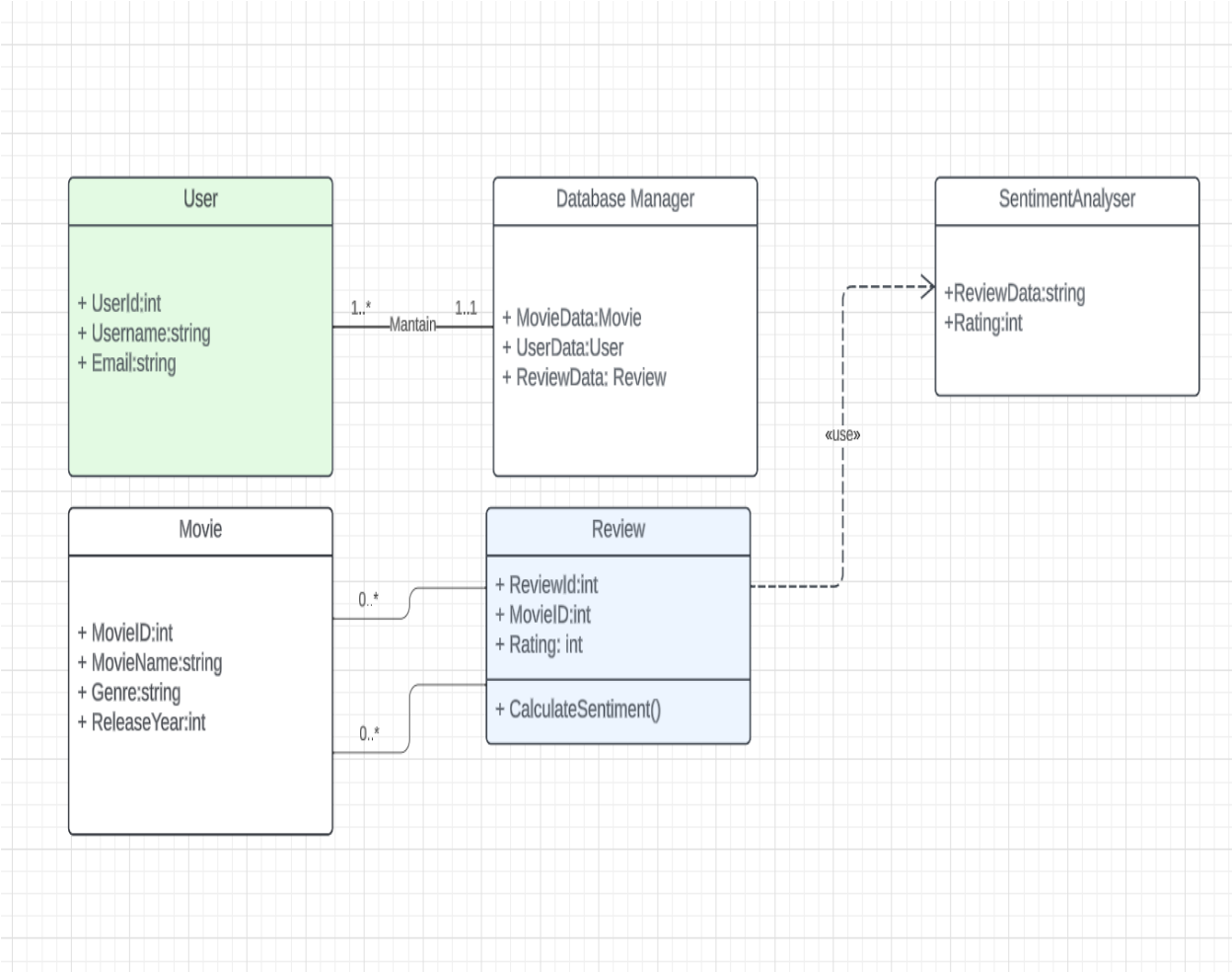
Date	Version	Comment
11-2023	Version 1	Initial Release

5. Document Approvers

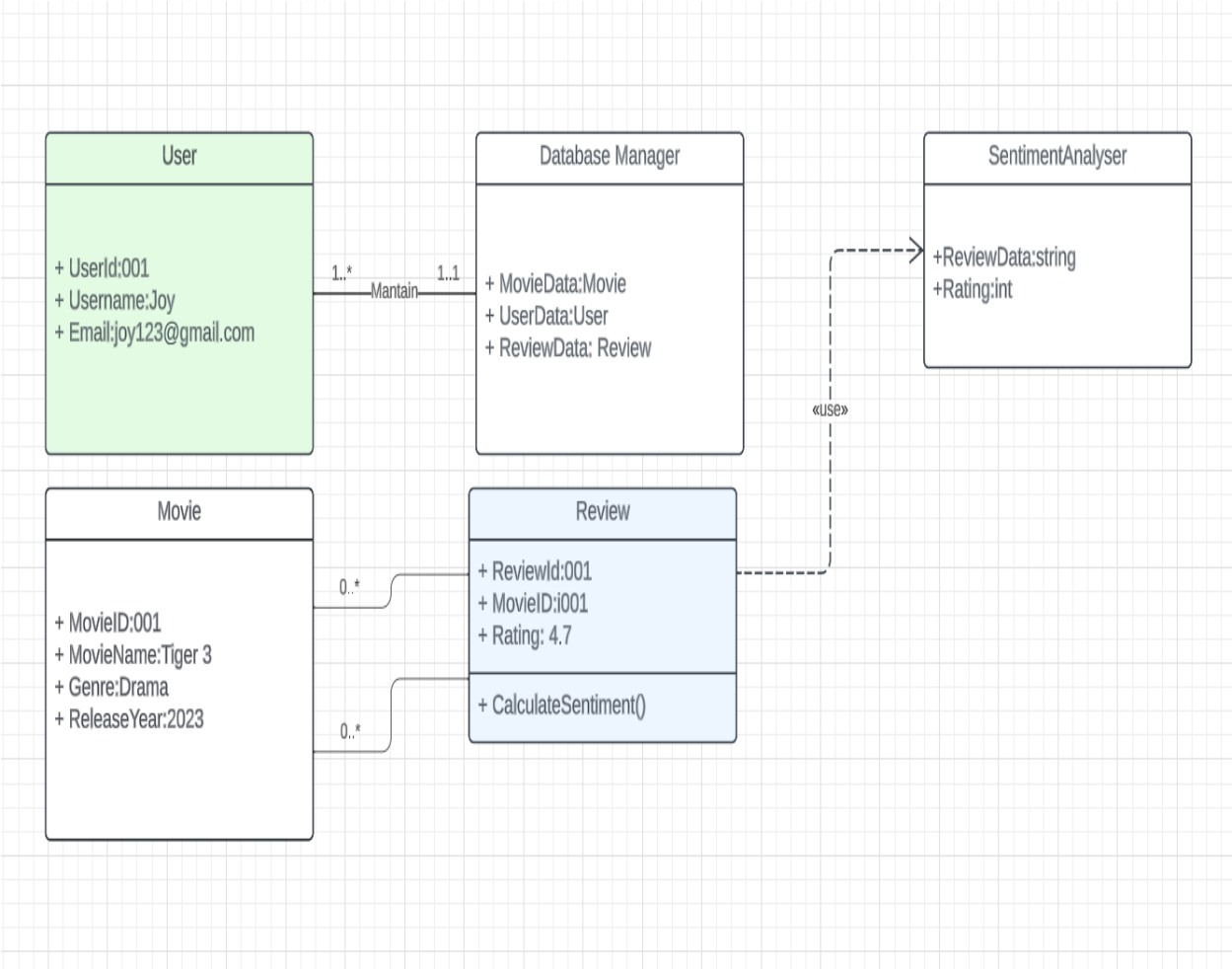
SRS for **User-Review Sentiment Analysis** approved by:
Name: Kanupriya
Designation: Teaching Assistant, Thapar Institute of Engineering and Technology
Date: _____

4. Design Phase

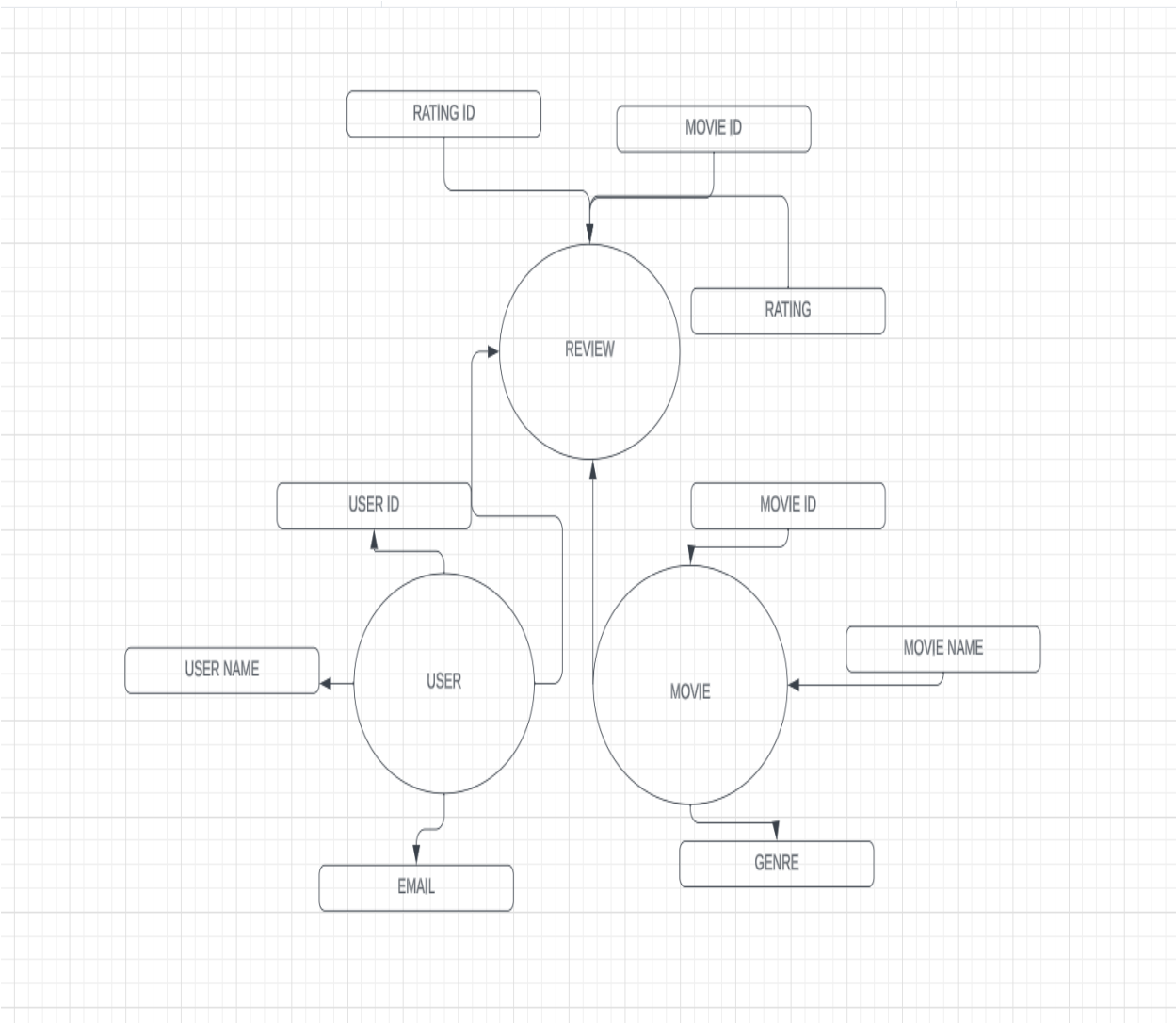
Class Diagram



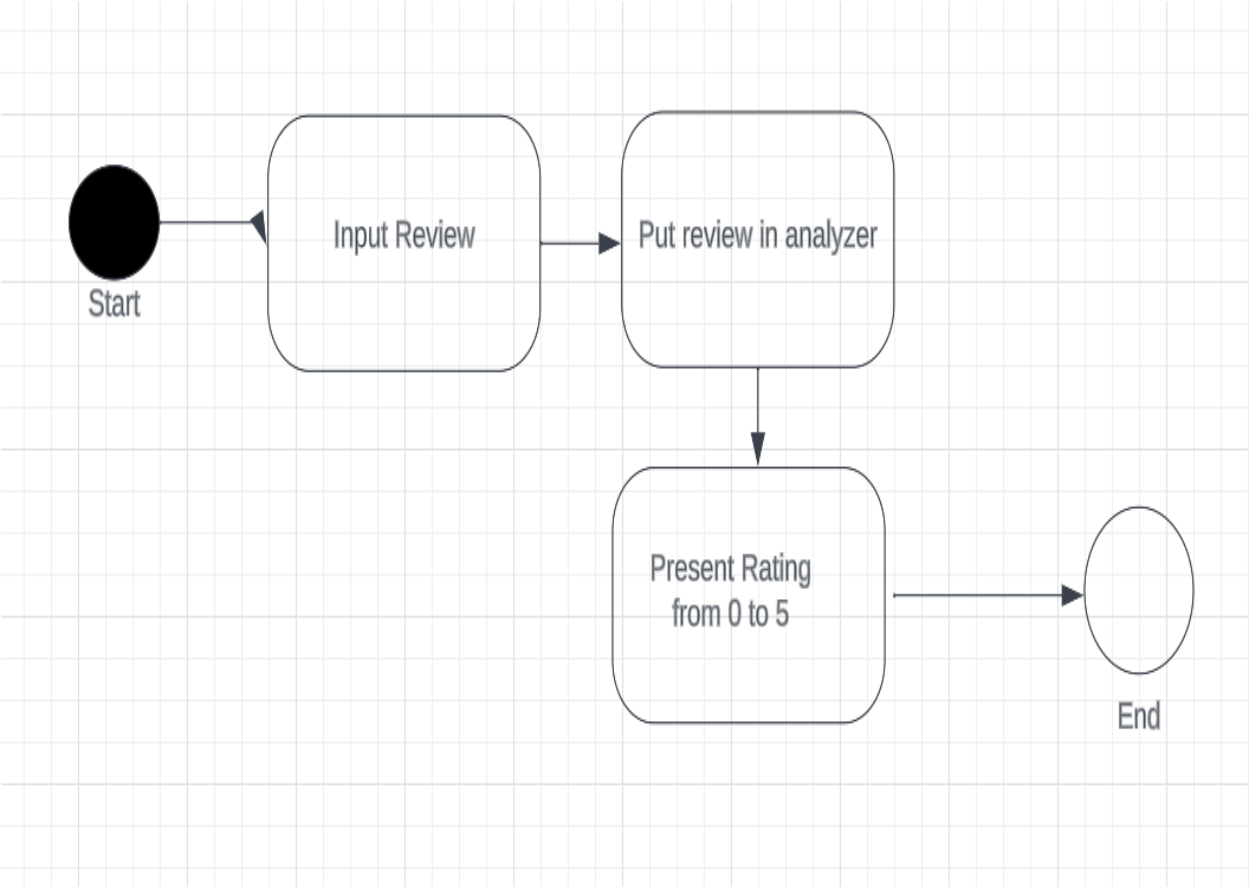
Object Diagram



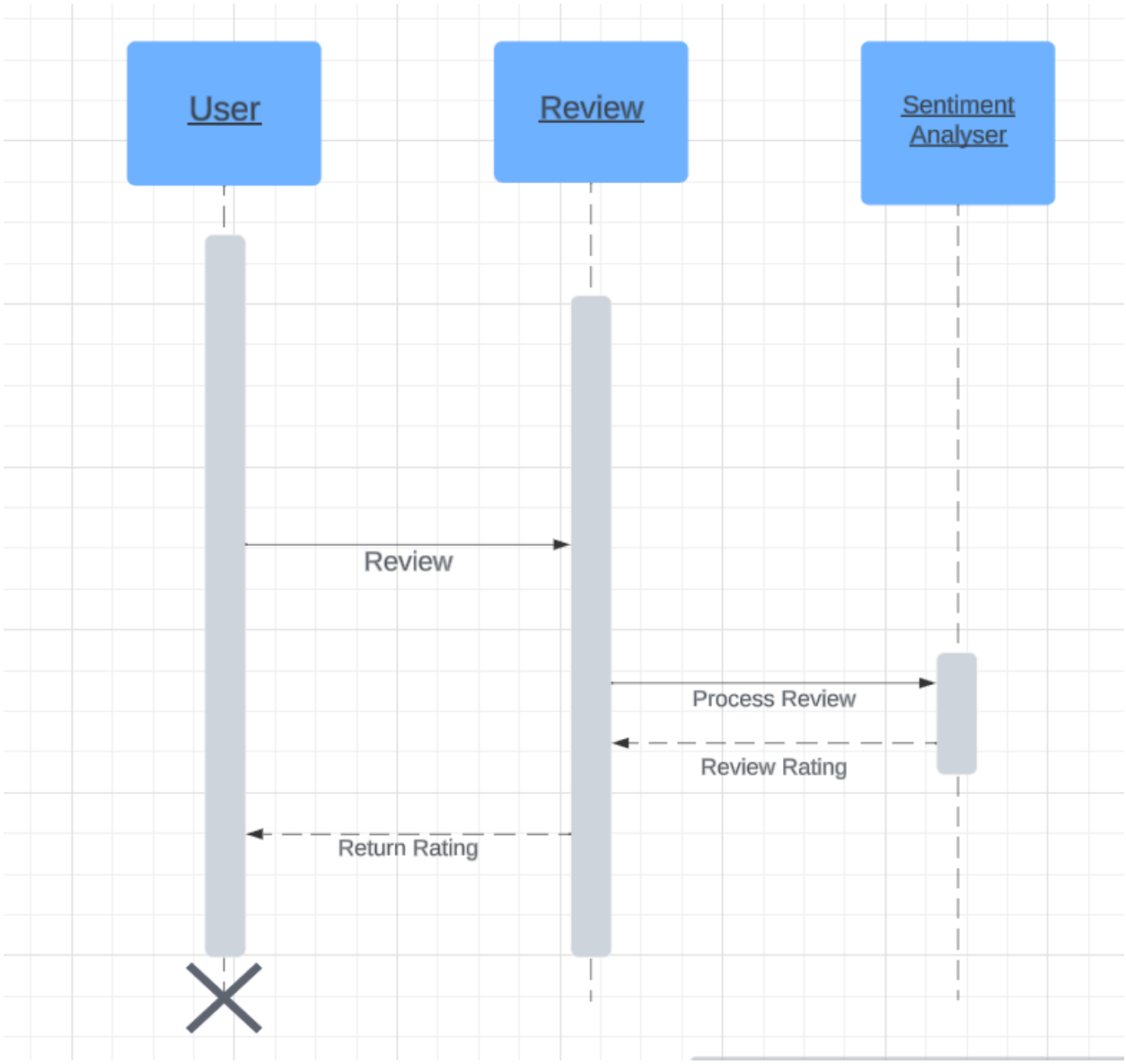
Database/ER Diagram



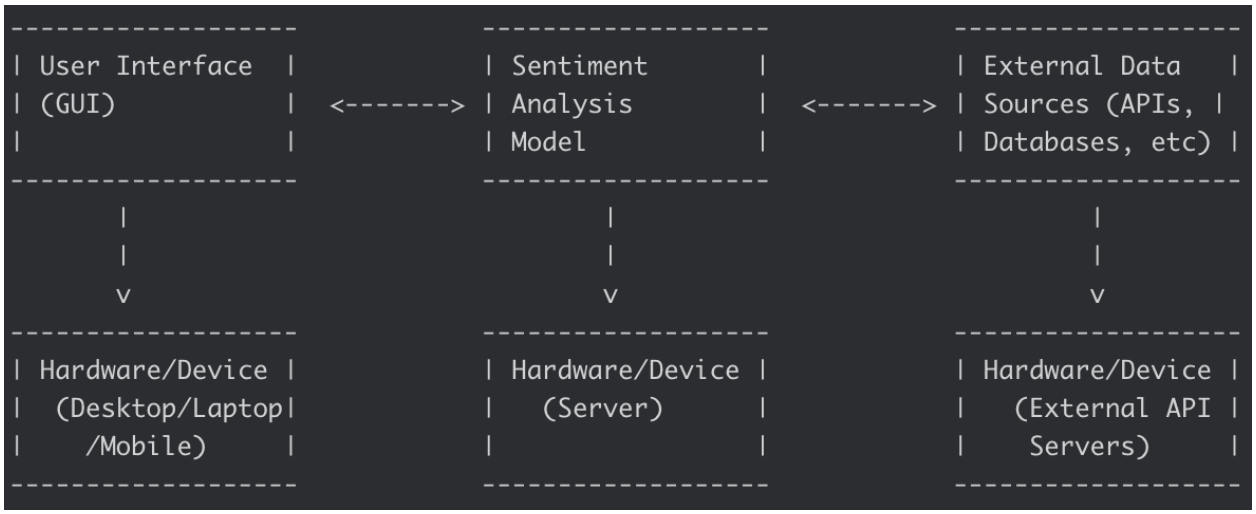
State Chart Diagram



Sequence Diagram



Deployment Diagram:



Deployment diagrams in software engineering illustrate the physical deployment of artifacts on nodes. In the context of your User-Review Sentiment Analysis System, this diagram showcases how the various software components are deployed onto hardware or physical nodes.

Explanation for the User-Review Sentiment Analysis System:

In the deployment diagram:

Nodes: Represent the physical entities where software components are deployed, such as servers, machines, or devices.

Components: Represent the software components or modules of the User-Review Sentiment Analysis System, like the User Interface, Data Retrieval Module, Sentiment Analysis Module, Visualization Module, etc.
Connections: Illustrate the relationships and dependencies between the components and the nodes on which they are deployed.
Artifacts: Represent the physical files or executables deployed on nodes, showcasing the realization of components in the physical world.

Component Diagram:

Component diagrams in software engineering display the structural relationships between components in a system. They show how various components or modules of a system interact and collaborate to achieve specific functionalities.

Explanation for the User-Review Sentiment Analysis System:

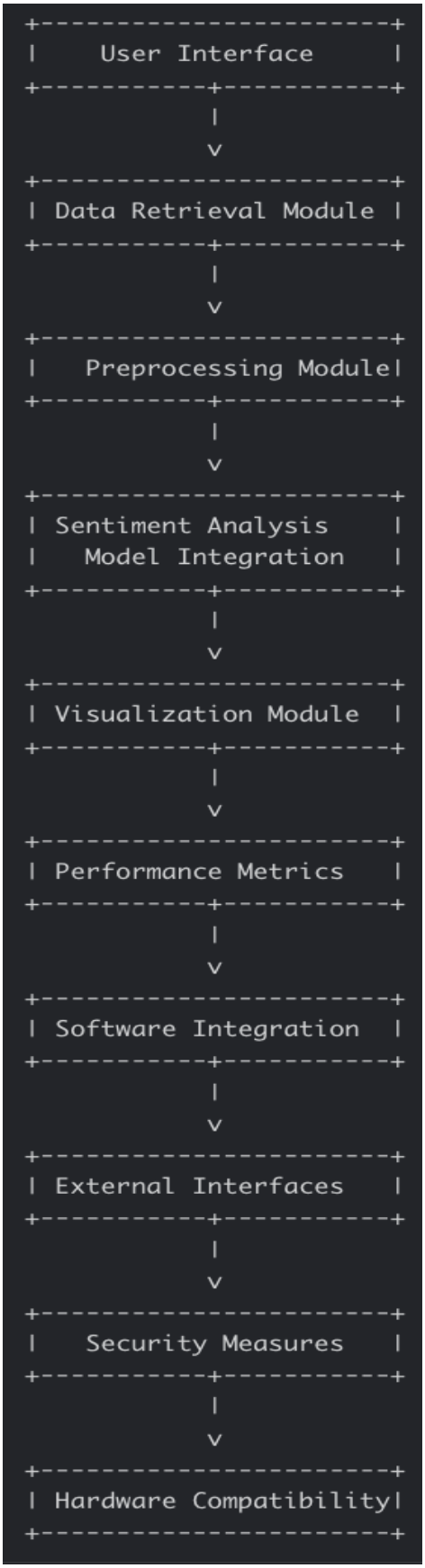
In the component diagram:

Components: Represent the modular building blocks or modules of the system, such as the User Interface, Data Retrieval Module, Sentiment Analysis Module, etc., as mentioned in your project.

Interfaces: Show how components interact with one another, indicating the dependencies or relationships between different modules.

Dependencies: Represent the relationships and connections between components, showing which modules rely on others for functionality or information.

Functionality: Each component represents a specific set of functionalities and encapsulates related behavior and data.


User Interface
Data Retrieval Module
Preprocessing Module
Sentiment Analysis Model Integration
Visualization Module
Performance Metrics
Software Integration
External Interfaces
Security Measures
Hardware Compatibility

Screenshots of Working Project

In summary, the Deployment diagram illustrates the physical deployment of software components onto hardware nodes, while the Component diagram showcases the structural composition of the software system and how different modules interact to achieve the system's goals. Both diagrams together provide a comprehensive understanding of the system's architecture, deployment, and internal interactions.

6. Test Cases and Test Reports

Test Case#: 1

Test Case Name: Claim Lost

System: User Sentiment Analysis

Subsystem: Item Updation

Designed By:
Dheeraj Arora (102103508)
Iqman Singh Bhatia (102103189)
Aadil Garg (102103198)
Yashmit Kapoor (102103182)

Design Date: 25/09/2023

Execution Date:17/10/2023

Executed By:
Divyajot Sapra (102103201)
Eishkaran Singh (102103202)
Arshjot Singh (102103205)
Manvir Kaur (102103206)

Short description: Assign appropriate rating to a review

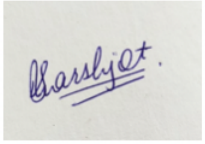
Pre-Conditions:

- The review writing box should contain the review of which the analysis needs to be done.

Step	Action	Expected System Response	Pass/ Fail	Comments
1.	Click on Predict button	**Assigns appropriate rating (out of 5) to the given review**	**pass**	
2.	Check post condition		**pass**	
3.				

Post-Conditions:

- System returns input review score on a scale of 0-5.
- System classifies the review as positive or negative



Input review from the Internet with an Original Rating of 3/5

Managed to catch this film in theatres on the first day of its release!! Directed by Maneesh Sharma & a part of the YRF spy universe, Tiger 3 is an "out and out" action film centred primarily on the protagonist, Tiger (Sallu Bhai)
This time Tiger and Zoya (Katrina Kaif) are pitted against the wily Aatish Rehman (Emraan Hashmi) an ISI agent gone rogue. The plot goes really over the top with our heroes stealing nuclear codes from the Pakis and then trying to save the PM of Pakistan (Simran) who has a striking resemblance to Real life Pak politician Hina Rabbani Khar.
In the middle of this hotchbpotch is a cameo from SRK who returns his favour to Tiger for saving him in Pathan. Don't miss the teaser of the next YRF film starring Hrithik (Kabir) at the end of the " Prabhu ka Naam" song !!
Some positives : Great action sequences, especially the ones performed by Katrina Kaif . The guys especially wud be waiting eagerly to watch the towel fight shot tastefully inside a Turkish hamam.
Star of the film who takes away some limelight from Salman is the antagonist Emraan Hashmi, an underated actor who hopefully will get his due after this film. Salman Bhai ke kya kehne! Fully in his comfort zone !!
The negatives : Action is over the top and totally unrealistic. Non innovative storyline with the Paki bashing premise is getting a tad bit boring!! Tiger and Co actually rescue the Pak PM from their army and get the Indian national anthem played on Pak independence day!! That scene is definitely a product of something that the writer smoked before he wrote it 😁😁!!
Being a YRF film, Tiger 3 is a decent one time watch & will definitely appeal to the masses Tiger jab Tak mara nahi , Tiger tab Tak haara nahi 👍... That dialogue got the most seeti's in the cinema hall .
I enjoyed Pathan more but it is not as bad as Jawan either !! A clean movie !! Go watch it!! Going with 3/5 for this one !! Adios 🙂!!

Rating of the input review predicted by our webapp=3.2, Positive

Test Case#: 2

Test Case Name: Claim Lost

System: User Sentiment Analysis

Subsystem: Item Updation

Designed By:
Dheeraj Arora (102103508)
Iqman Singh Bhatia (102103189)
Aadil Garg (102103198)
Yashmit Kapoor (102103182)

Design Date: 25/09/2023

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Short description: Assign appropriate rating to a review

Pre-Conditions:

- The review writing box should contain the review of which the analysis needs to be done.

Step	Action	Expected System Response	Pass/ Fail	Comments
1.	Click on Predict button	**Assigns appropriate rating (out of 5) to the given review**	**pass**	
2.	Check post condition		**pass**	
3.				

Post-Conditions:

- System returns input review score on a scale of 0-5.
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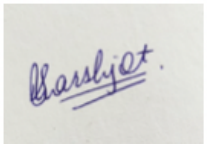


Input review from the Internet with a rating of 1/5

Traumatized after watching this movie, slept twice in the middle of the movie 😞 The action scenes with body double and slow motion looked like THUMBS UP commercial The review that you see here with five stars are written by Salman Khan himself Most movie is shot on Green scene as Salman Khan is too old to perform his own stunts But he is still doing lunges and calls it dance moves its puzzling why filmmakers invest so much these days in deceiving people everything is poorly executed especially the portrayal of the lead character, which is quite pathetic It's unclear when they will retire old talent and bring in fresh faces from India Several companies openly engage in this practice Just wait a couple of months and you will see the ratings and reviews from real users which will likely drop this movie to less than two stars with numerous negative reviews Liger was a better movies than this tiger 🤣 The plot seems convoluted and lacks coherence jumping from one subplot to another without proper development We can see some vfx issues during fight scenes Overall nothing new Some scene are okay but overall not that much good They should have focused more in the story rather than fighting scene Expected more from Imran and Katrina But didn't get enough chances to make noticable impacts

Rating of the input review predicted by our webapp=0.75, Negative

Test Case#: 3

Test Case Name: Claim Lost

System: User Sentiment Analysis

Subsystem: Item Updation

Designed By:
Dheeraj Arora (102103508)
Iqman Singh Bhatia (102103189)
Aadil Garg (102103198)
Yashmit Kapoor (102103182)

Design Date: 25/09/2023

Execution Date:17/10/2023

Executed By:
Divyajot Sapra (102103201)
Eishkaran Singh (102103202)
Arshjot Singh (102103205)
Manvir Kaur (102103206)

Short description: Assign appropriate rating to a review

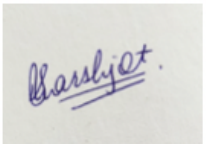
Pre-Conditions:

- The review writing box should contain the review of which the analysis needs to be done.

Step	Action	Expected System Response	Pass/ Fail	Comments
1.	Click on Predict button	**Assigns appropriate rating (out of 5) to the given review**	**pass**	
2.	Check post condition		**pass**	
3.				

Post-Conditions:

- System returns input review score on a scale of 0-5.
- System classifies the review as positive or negative



Input review from the Internet with a rating of 4.4/5

Placements: The placement scene is great for thapar. My senior who lives beside my room got an internship at microsoft. Huge companies do visit here, rest depends upon capabilities of the person. I don't know much of data but companies do visit here and students do get placed.

Infrastructure: Mess is great. Rooms are also very good. Infrastructure is actually quite good. We have a central park (nirvana) here which so beautiful. The library is so good too. We get everything here. Also the mess food is of good quality. You don't miss your home so much.

Faculty: Lectures are so. In the end, you have to study yourself. Also so many exams: (But the curriculum is relevant I guess. Exams are tough but if you study you can easily score above average. CGPA is important to maintain as companies do check it so we have to study here.

Rating of the input review predicted by our webapp=4.45, Positive