Software Requirements Specification (SRS) for TALKALYTICS

1. Introduction

1.1 Purpose

The purpose of this document is to provide a comprehensive overview of the requirements for the development of the Talkalytics, a software application designed to analyze and provide insights into WhatsApp conversations.

1.2 Scope

The Talkalytics aims to analyze WhatsApp chat logs, generate statistics, and provide insights into user interactions. It will be a standalone desktop application designed for Windows, macOS, and Linux platforms.

2. System Overview

2.1 System Description

The Talkalytics will have the following key features:

- Import WhatsApp chat logs in text format.

- Analyze chat logs to extract data, including messages, timestamps, and participant information.

- Generate statistical reports on message frequency, user activity, most active times, and more.

- Provide graphical representations of chat data.

2.2 Users

The primary users of the Talkalytics will be individuals and small groups who want to gain insights into their WhatsApp conversations.

3. Functional Requirements

3.1 User Authentication

The system shall not require user authentication as it operates on publicly available chat logs.

3.2 Chat Log Import

The system shall allow users to import WhatsApp chat logs in text format.

3.3 Data Analysis

The system shall perform the following analyses:

- Message frequency analysis.

- User activity analysis.

- Most active times analysis.

- Keyword and sentiment analysis (if feasible).

3.4 Report Generation

The system shall generate detailed reports and graphical representations of the chat data based on the analysis performed.

3.5 User Interface

The system shall have a user-friendly graphical user interface (GUI) that allows users to easily import chat logs, perform analysis, and export results.

4. Non-Functional Requirements

4.1 Performance

The system shall be able to analyze chat logs of up to 1,000,000 messages without significant performance degradation.

4.2 Reliability

The system shall ensure data integrity and accuracy in the analysis results.

4.3 Compatibility

The application shall be compatible with Windows 10 and later, macOS, and popular Linux distributions.

4.4 Security

The system shall not store or transmit any personal or sensitive information from the chat logs.

4.5 Usability

The GUI shall be intuitive and user-friendly, requiring minimal training for users to operate.

5. Constraints

- The system will only support text-based chat logs in a format compatible with WhatsApp exports.

- The system's analysis capabilities may be limited by the quality and content of the chat logs.

6. Assumptions and Dependencies

- The availability of WhatsApp chat logs in text format.

- The availability of standard libraries and tools for text analysis.

7. Conclusion

This Software Requirements Specification (SRS) has outlined the functional and non-functional requirements for the Talkalytics. It serves as a foundation for the development of the application, ensuring that it meets the needs of its users while adhering to performance, security, and usability standards.