

# Initial Requirements

## Small Business Sentiment Analysis

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### 1. Introduction

#### 1.1 Purpose

This software is made to take in a batch of reviews from a user, authenticate and track the api key they used, and return a sentiment score of the statement they used.

#### 1.2 Scope

The software will allow users to:

- Create an account, and receive api key
- Receive single reviews and return sentiment score
- Receive a batch of reviews and return sentiment scores for each
- Track and Log api key usage

The system will run on AWS or GCP and store data in a database hosted there as well

#### 1.3 Definitions

Term	Meaning
User	Person using the application
Review	A statement
Authentication	Verifying user permissions
DB	Database used to store user info

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## 2. Functional Requirements

### 2.1 User Account Creation

**FR-1:** Users must be able to register with:

- Username
- Password

And they should receive an API key that should be stored safely and securely

**FR-2:** An entry should be made in the DB with a username and id, with usage set to 0

**FR-3:** Passwords must be stored securely (hashed)

**FR-4:** API Key must be stored securely (hashed)

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### 2.2 Single Review Sentiment Analysis

**FR-4:** Users must be able to send a POST request to the API with a json object containing

- API key in the bearer authentication
- A review

**FR-5:** The review should be quickly and securely processed by the ML model

**FR-6:** The user should receive a sentiment score, described as NEG, NEU, or POS, with a confidence score following

**FR-7:** The API usage tracker for the user should be increased by one

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### 2.3 Batch Review Sentiment Analysis

**FR-8:** Users must be able to send a POST request to the API with a json container having

- An API key in the Bearer authentication

- And each object having
  - A review
  - A review ID

**FR-9:** Each review should be quickly and securely processed by the ML model

**FR-10:** The user should receive back the list of reviews, with the ID's that match each one they sent in

**FR-11:** Along with the review and review ID, users should receive a sentiment score, described as NEG, NEU, or POS, with a confidence score following each review

**FR-12:** The API usage tracker for the user should be increased by one for each review in the batch

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## 2.4 Data Query

**FR-13:** Simple SQL queries should work smoothly on the backend