

Initial Requirements

Small Business Sentiment Analysis

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

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)

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

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

2.4 Data Query

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