Chapter 2. Project Objectives and Requirements

In this chaper we will discuss about the project's main and secondary objectives to have a better visualization of system. We will also present the functional and non-functional requirements and the metrics used to evaluate different AI models.

2.1. Main Objectives

The main objective of this project is to study, design, and implement a web application that provides support in enhancing users’ mental health and well-being by tracking their moods, emotions and activities. The goal is to provide a user-friendly application which can be used by any individual interested in improving life’s quality. The integration of an AI model that facilitates emotion detection in text is an inportant task. For this, robust research in finding the most suitable approach is done.

2.2. Secondary Objectives

The secondary objectives are listed in the table below. They are driven from the main objective, each row contains a brief description of the objective, and also a reference to the appropriate section in the thesis where that objective is discussed in more detail.

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| --- | --- | --- | --- |
| **No.** | **Objective** | **Description** | **Reference** |
| 1. | Research of the emotion detection in text approaches | Emotion Detection is a Natural Language Processing task which can be implemented through various computational approaches. In order to deliver an accurate prediction to the user, we have gone through robust research analyzing papers that studied the same problem. | Chapter 3. |
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| 3. |  |  |  |
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Table 2.1 Secondary Objectives

2.3. Requirements

2.3.1. Functional Requirements

These requirements represent the basic functionalities the system must provide to the end user.

1. User-friendly interface

* The application should provide a user-friendly interface through which the user access the system's resources.

1. User Registration and Authentication

* Each user should be able to register and login securely to the web application. There can not be two users with the same email.

2. Mood and Activities Tracking

* The user should be able to record an Entry that consists of mood (1 out of 5) associated with activities.

2. Statistics View

* The user should be able to view the statistics regarding the mood count, mood fluctuation, and activity count so he has a better overview of day-by-day living.

3. Journal Page Writing for Emotion Detection

* The user should be able to type the highlight of the day based on which emotion detection will be performed and access it whenever he wants.

4. Emotion Detection

* Based on the journal page, the system should be able to perform emotion detection using the incorporated AI model.

5. Note Page

* The user should be able to type any kind of text, which is associated with a note. There is just one note per day.

6. Get inspired by the Quotes Page

* The API that provides inspirational quotes should be accessible by the system, so implicitly, the user can get inspired and motivated.

2.3.2 Non-functional Requirements

These requirements represent the quality constraints the system must satisfy.

1. Performance

* The system should be able to perform the necessary tasks in a relatively short time, when the most time and resource-consuming is the emotion detection task.

1. Security

* The