



*Green University of Bangladesh*

*Department of Computer Science and Engineering (CSE)  
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## **Daily Mood Journal with Emoji Analysis**

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*Course Title: Web programming Lab  
Course Code: CSE 302  
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<b>Marks:</b>	<b>Signature:</b>
<b>Comments:</b>	<b>Date:</b>

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# Chapter 1

## Introduction

### 1.1 Overview

The Daily Mood Journal with Emoji Analysis is a web-based application designed to help users track their daily moods using emojis. The application allows users to log their emotions, analyze mood trends over time, and gain insights into their emotional well-being. The project leverages HTML, CSS, and JavaScript to create an interactive and user-friendly interface.

### 1.2 Motivation

In today's fast-paced world, mental health and emotional well-being are often overlooked, leading to stress, anxiety, and decreased productivity. Tracking daily moods helps individuals become more self-aware, recognize emotional patterns, and take proactive steps toward better mental health. However, traditional mood-tracking methods can feel tedious, making it difficult for users to stay consistent. This project leverages the simplicity of emojis to make mood tracking intuitive, engaging, and accessible to everyone. By integrating interactive data visualization, users can easily analyze their emotional trends over time, helping them make informed lifestyle adjustments. Additionally, privacy is a key focus, as all data is stored locally in the browser, ensuring a secure and hassle-free experience. Whether for personal self-reflection, therapy support, or wellness programs, this tool provides a practical and user-friendly solution to promote emotional awareness and mental well-being. These factors motivated us to work on this project [1].

### 1.3 Problem Definition

#### 1.3.1 Problem Statement

The problem is to create a web application that allows users to log their daily moods using emojis, store this data, and provide visual analysis of mood trends over time.

### 1.3.2 Complex Engineering Problem

The following table must be completed according to your above discussion in detail. The column on the right side should be filled only on the attributes you have chosen to be touched by your own project.

Table 1.1: Summary of the attributes touched by the mentioned projects

Name of the P Attributes	Explain how to address
<b>P1:</b> Depth of knowledge required	Requires expertise in front-end development, data visualization, and user interaction design.
<b>P2:</b> Range of conflicting requirements	Balances simplicity vs. detailed tracking and privacy vs. data persistence.
<b>P3:</b> Depth of analysis required	Analyzes mood trends using local storage data and visual charts.
<b>P4:</b> Familiarity of issues	Addresses user engagement, data privacy, usability, and accessibility challenges.
<b>P5:</b> Extent of applicable codes	Fully utilizes HTML, CSS, JavaScript for UI, storage, and interactivity.
<b>P6:</b> Extent of stakeholder involvement and conflicting requirements	Users may prefer quick mood logging or detailed journaling, requiring a flexible design.
<b>P7:</b> Interdependence	The app's UI, storage, and data visualization are tightly connected for a seamless experience.

## 1.4 Design Goals/Objectives

The primary goal of this project is to create a user-friendly and engaging platform for tracking daily moods using emojis. The interface should be intuitive and visually appealing, ensuring users can log their emotions effortlessly. To provide meaningful insights, the system will incorporate interactive data visualization techniques, such as charts and graphs, to display mood trends over time. Privacy is a key focus, with all data being stored locally in the browser to eliminate external dependencies and security concerns. Additionally, the project aims to maintain a lightweight and responsive design, making it accessible across different devices while ensuring a seamless user experience.

## 1.5 Application

The Daily Mood Journal with Emoji Analysis has diverse applications in mental health awareness, personal self-care, and emotional tracking. It provides individuals with an easy-to-use tool for self-monitoring, allowing them to log their moods daily and observe patterns over time. This can be particularly beneficial for those managing stress, anxiety, or depression, as it helps them recognize emotional triggers and track improvements in their well-being. Beyond personal use, the application can be recommended by therapists and counselors as a self-reflection tool for clients undergoing therapy, providing

insights into emotional fluctuations. It can also be integrated into workplace wellness programs, enabling employees to track their mental well-being and identify stress patterns that may affect productivity. Additionally, educational institutions can use it to promote mental health awareness among students, encouraging them to develop emotional intelligence and self-awareness. Since the project is web-based and lightweight, it can be accessed from any device without requiring software installation. This ensures convenience, privacy, and accessibility, making it a practical tool for anyone looking to gain a better understanding of their emotional health. [1] also.

# Chapter 2

## Design/Development/Implementation of the Project

### 2.1 Introduction

The Daily Mood Journal with Emoji Analysis is developed as a lightweight, web-based application that leverages standard web technologies such as HTML, CSS, and JavaScript. The design is structured into three primary modules: User Input, Data Storage, and Data Visualization [2] [3] [4].

### 2.2 Project Details

The project is developed using HTML, CSS, and JavaScript. Key components include the mood tracking interface, data storage using local storage, and data visualization using libraries like Chart.js. The design follows a modular structure, allowing each component to function independently while maintaining data flow consistency.

#### 2.2.1 Subsection\_name

You can fix the height, width, position, etc., of the figure accordingly.

### 2.3 Implementation

#### The workflow

**Login Authentication:** When a user visits the site, they are first greeted with a login interface. The user must enter a valid username and password. If the credentials match the predefined values, the user gains access to the main interface. Otherwise, an error message is displayed.

**Mood Selection:** After successful login, the user is presented with a set of emotion

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <title>My Mood Journal</title>
  <link
    href="https://fonts.googleapis.com/css2?family=Inter:wght@400;600&display=swap"
    rel="stylesheet"
  />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
  <link rel="stylesheet" href="style.css" />
</head>
<body>
  <div id="loginContainer" class="login-container">
    <h2>Login</h2>
    <form id="loginForm">
      <input
        type="text"
        id="username"
        placeholder="Username"
        required
        autocomplete="username"
      />
      <input
        type="password"
        id="password"
        placeholder="Password"
        required
        autocomplete="current-password"
      />
    </form>
  </div>

```

Figure 2.1: Figure 1

```

Welcome index.html X Settings # style.css
index.html ...
  2 <html lang="en">
 14 <body>
 15 <div id="loginContainer" class="login-container">
 16 <form id="loginForm">
 17 <input
 18 </input>
 19 </form>
 20 </div>
 21 <div id="mainContainer" class="main-container hidden">
 22 <h1>How Are You Feeling Today?</h1>
 23 <p>Select your mood & write something about it.</p>
 24 <div class="emoji-grid">
 25 <div class="emoji" data-mood="Happy">😊</div>
 26 <div class="emoji" data-mood="Sad">😞</div>
 27 <div class="emoji" data-mood="Angry">😡</div>
 28 <div class="emoji" data-mood="Calm">😌</div>
 29 <div class="emoji" data-mood="Joyful">😄</div>
 30 </div>
 31 <div id="selectedMoodText"></div>
 32 <textarea id="moodNote" placeholder="Write about your feeling..."></textarea>
 33 <button id="submitMood">Save Mood</button>
 34 <button id="viewHistory">Monthly Review</button>
 35 </div>
 36 <div id="doctorSupport" class="doctor-support hidden">
 37 <h3>Need Support?</h3>
 38 <p>If you're feeling down often, consider reaching out for help:</p>
 39 <ul class="doctor-list">
 40 <li>
 41 <strong>Dr. Rahim Uddin</strong>
 42 <a href="tel:+8801712345678" class="doctor-contact">Call</a>
 43 <a href="mailto:rahim@example.com" class="doctor-contact">Email</a>
 44 </li>
 45 <li>
 46 <strong>Dr. Farida Khatun</strong>
 47 <a href="tel:+8801912345678" class="doctor-contact">Call</a>
 48 <a href="mailto:farida@example.com" class="doctor-contact">Email</a>
 49 </li>
 50 </ul>
 51 </div>

```

Figure 2.2: Figure 2

```

<html lang="en">
<body>
  <div id="mainContainer" class="main-container hidden">
    <div class="emoji-grid">
      <div class="emoji" data-mood="Happy">😊</div>
      <div class="emoji" data-mood="Sad">😞</div>
      <div class="emoji" data-mood="Angry">😡</div>
      <div class="emoji" data-mood="Calm">😌</div>
      <div class="emoji" data-mood="Joyful">😄</div>
    </div>
    <div id="selectedMoodText"></div>
    <textarea id="moodNote" placeholder="Write about your feeling..."></textarea>
    <button id="submitMood">Save Mood</button>
    <button id="viewHistory">Monthly Review</button>
  </div>
  <div id="doctorSupport" class="doctor-support hidden">
    <h3>Need Support?</h3>
    <p>If you're feeling down often, consider reaching out for help:</p>
    <ul class="doctor-list">
      <li>
        <strong>Dr. Rahim Uddin</strong>
        <a href="tel:+8801712345678" class="doctor-contact">Call</a>
        <a href="mailto:rahim@example.com" class="doctor-contact">Email</a>
      </li>
      <li>
        <strong>Dr. Farida Khatun</strong>
        <a href="tel:+8801912345678" class="doctor-contact">Call</a>
        <a href="mailto:farida@example.com" class="doctor-contact">Email</a>
      </li>
    </ul>
  </div>

```

Figure 2.3: Figure 3



```

index.html > ...
<html lang="en">
<body>
  <div id="mainContainer" class="main-container hidden">
    <div id="doctorSupport" class="doctor-support hidden">
      <ul class="doctor-list">
        </ul>
      </div>
      <div id="historySection" class="hidden">
        <h2> Your Mood History</h2>
        <ul id="historyList"></ul>
        <h3> Monthly Mood Chart</h3>
        <canvas id="moodChart" width="400" height="200"></canvas>
      </div>
    </div>
  </body>
</html>

```

Figure 2.4: Figure 4

```

index.html > ...
<html lang="en">
<body>
  <div id="mainContainer" class="main-container hidden">
    <div id="doctorSupport" class="doctor-support hidden">
      <ul class="doctor-list">
        </ul>
      </div>
      <div id="historySection" class="hidden">
        <h2> Your Mood History</h2>
        <ul id="historyList"></ul>
        <h3> Monthly Mood Chart</h3>
        <canvas id="moodChart" width="400" height="200"></canvas>
      </div>
    </div>
  </body>
</html>
<script>
  document.addEventListener("DOMContentLoaded", () => {
    const validUsername = "admin";
    const validPassword = "1234";
    const loginForm = document.getElementById("loginForm");
  });
</script>

```

Figure 2.5: Figure 5

```

index.html > ...
<html lang="en">
<body>
  <div id="mainContainer" class="main-container hidden">
    </div>
  </div>
  <div id="doctorSupport" class="doctor-support hidden">
    <ul class="doctor-list">
      </ul>
    </div>
    <div id="historySection" class="hidden">
      <h2> Your Mood History</h2>
      <ul id="historyList"></ul>
      <h3> Monthly Mood Chart</h3>
      <canvas id="moodChart" width="400" height="200"></canvas>
    </div>
  </div>
</body>
</html>
<script>
  document.addEventListener("DOMContentLoaded", () => {
    const validUsername = "admin";
    const validPassword = "1234";
    const loginForm = document.getElementById("loginForm");
    const mainContainer = document.getElementById("mainContainer");
    const loginContainer = document.getElementById("loginContainer");
    const doctorSupport = document.getElementById("doctorSupport");
    const emojiElements = document.querySelectorAll(".emoji");
    const selectedMoodText = document.getElementById("selectedMoodText");
    const moodNote = document.getElementById("moodNote");
    const submitMoodBtn = document.getElementById("submitMood");
    const viewHistoryBtn = document.getElementById("viewHistory");
    const historySection = document.getElementById("historySection");
    const historyList = document.getElementById("historyList");
    const moodChartCtx = document.getElementById("moodChart").getContext("2d");
    let selectedMood = null;
    let moodHistory = [];
  });
</script>

```

Figure 2.6: Figure 6

```

document.addEventListener("DOMContentLoaded", () => {
  const historyList = document.getElementById("historyList");
  const moodChartCtx = document.getElementById("moodChart").getContext("2d");

  let selectedMood = null;
  let moodHistory = [];

  // Login Handling
  loginForm.addEventListener("submit", (e) => {
    e.preventDefault();
    const username = document.getElementById("username").value.trim();
    const password = document.getElementById("password").value.trim();

    if (username === validUsername && password === validPassword) {
      alert("Login Successful!");
      loginContainer.classList.add("hidden");
      mainContainer.classList.remove("hidden");
      doctorSupport.classList.remove("hidden");
    } else {
      alert("Invalid username or password");
    }
  });

  // Select Mood
  emojiElements.forEach(emoji => {
    emoji.addEventListener("click", () => {

```

Figure 2.7: Figure 7

buttons (e.g., Happy, Sad, Angry, Calm, Joyful). These are represented with emojis for an intuitive and interactive experience. The user selects the emotion that best reflects their current mood.

**Note Entry:** The user has the option to write a short note about their selected mood. This helps in expressing feelings in more detail, supporting self-reflection and journaling.

**Saving the Entry:** Once the mood and optional note are provided, the user can save the entry. This action stores the information temporarily in the session's memory and displays a confirmation message.

**Monthly Review:** Users can navigate to the "Monthly Review" section to view a summary of all recorded mood entries during the session. Each entry is displayed with the date, time, selected emotion, and note.

**Mood Statistics:** A bar chart is generated using Chart.js, showing the frequency of each mood selected throughout the session. This visual aid helps users to analyze their emotional trends.

**Doctor Support:** For mental health support, a section provides contact information of professional doctors. This feature encourages users to seek help if they are struggling with their emotional well-being.

This structured workflow allows users to reflect on their mental state in a simple, organized manner while supporting both personal insight and professional assistance if needed.

## Tools and libraries

**HTML5** Used to structure the content of the web pages. It forms the backbone of the user interface.

**CSS3** Utilized to style the web pages, including layout, colors, spacing, and responsive design elements.

**JavaScript** Handles client-side interactivity, such as mood button responses, form validation, and chart rendering.

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <title>My Mood Journal</title>
  <link
    href="https://fonts.googleapis.com/css2?family=Inter:wght@400;600&display=swap"
    rel="stylesheet"
  />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
  <link rel="stylesheet" href="style.css" />
</head>
<body>
  <div id="loginContainer" class="login-container">
    <h2>Login</h2>
    <form id="loginForm">
      <input
        type="text"
        id="username"
        placeholder="Username"
        required
        autocomplete="username"
      />
      <input
        type="password"
        id="password"
        placeholder="Password"
        required
        autocomplete="password"
      />
    </form>
  </div>
</body>
</html>

```

Figure 2.8: Enter Caption

Chart.js A JavaScript library used to generate dynamic and responsive bar charts for visualizing mood statistics.

## Implementation details (with screenshots and programming codes)

## 2.4 Algorithms

Start the application Load the web page and initialize the interface. The user is presented with mood options (icons or buttons) and a journal text input field.

Wait for user interaction The system remains idle until the user selects a mood icon.

Capture mood selection Once a mood is selected, highlight the chosen mood and store it temporarily in a variable.

Capture journal entry The user types a short note or description of their current mood in the input box.

Submit data Upon clicking the "Submit" or "Save" button:

Get the selected mood.

Get the journal text.

Record the current date and time.

Create an object combining mood, journal text, and timestamp.

Store data locally

Retrieve existing entries from localStorage.

Append the new mood entry to the existing list.

Save the updated list back to localStorage as a JSON string.

Update mood history display

Dynamically update the interface to show the new entry in the history section.

Each entry displays mood, journal note, and timestamp.

Clear input for next use Reset the mood selection and input field to default.

Allow repeat usage Users can make multiple entries in a day. Each is handled and stored separately.

On page load Automatically load and display all past mood entries from localStorage.

End The application is ready for the next interaction, and data remains persistent unless manually cleared by the user.

- Bullet points can also be included anywhere in this project report.

---

**Algorithm 1:** Sample Algorithm

---

**Input:** Your Input  
**Output:** Your output  
**Data:** Testing set  $x$

```
1  $\sum_{i=1}^{\infty} := 0$  // this is a comment
  /* Now this is an if...else conditional loop */
2 if Condition 1 then
3   | Do something // this is another comment
4   | if sub-Condition then
5   | | Do a lot
6 else if Condition 2 then
7   | Do Otherwise
  /* Now this is a for loop */
8   | for sequence do
9   | | loop instructions
10 else
11 | Do the rest
  /* Now this is a While loop */
12 while Condition do
13 | Do something
```

---

# Chapter 3

## Performance Evaluation

### 3.1 Simulation Environment/ Simulation Procedure

pen the Project Launch the project by opening the index.html file in any modern web browser (e.g., Chrome, Firefox).

View the Interface The mood tracking interface appears, showing various mood buttons, a text input area, and a submit button.

Select Mood Click on any one of the available mood buttons (e.g., Happy, Sad, Angry, etc.).

Write Journal Entry (Optional) If desired, type a short message or note in the journal entry text box describing the reason or context behind your mood.

Submit the Entry Click the “Submit” button. The selected mood, written note, and current timestamp are saved in the browser’s local storage.

View Mood History After submission, the entry appears instantly in the “Mood History” section below, along with other previously saved entries.

Repeat Entries You can add more mood entries by repeating steps 3 to 6 at any time.

Close and Reopen Close the browser. When the file is reopened again later, all previously saved moods and journal notes will still be visible thanks to local storage.

#### 3.1.1 Subsection

#### 3.1.2 Subsection

### 3.2 Results Analysis/Testing

Discussion about your various results should be included in this chapter in detail.

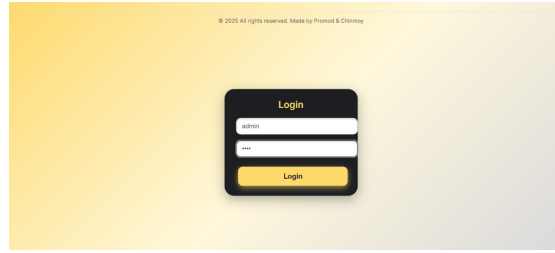


Figure 3.1: Fig 1-Login Page

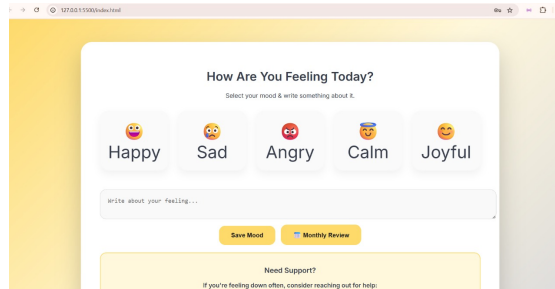


Figure 3.2: Fig2- mood select

### 3.2.1 Result\_portion\_1

### 3.2.2 Result\_portion\_2

### 3.2.3 Result\_portion\_3

## 3.3 Results Overall Discussion

The My Mood Journal project successfully meets its objective of providing a simple, intuitive, and effective platform for users to track their emotional states over time. Users are able to select from a variety of mood options, input personalized journal entries, and store this data locally without requiring an internet connection or external database. Through repeated usage, the system allows users to reflect on their emotional patterns and daily experiences. The mood history section functions reliably, displaying mood entries in chronological order with accurate timestamps and associated notes. During

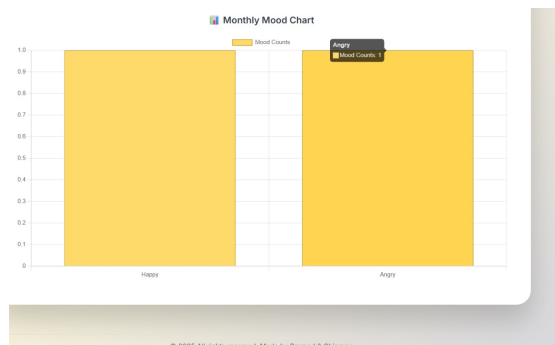


Figure 3.3: Fig 3- Graph

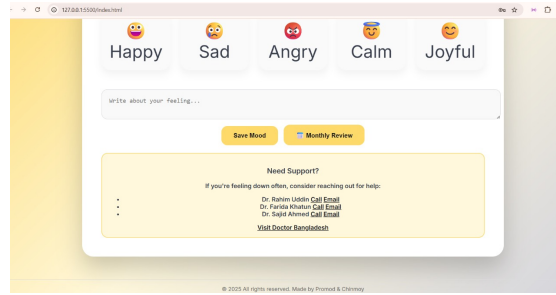


Figure 3.4: Fig 4- Fullview

testing, the interface showed consistent behavior across modern browsers, and all entries were retained even after closing the browser, validating the use of local storage. The system demonstrated robustness in handling edge cases such as empty journal fields or rapid multiple entries. Overall, the project delivers a smooth and interactive user experience, and stands as a useful tool for promoting mental self-awareness and emotional well-being.

### 3.3.1 Complex Engineering Problem Discussion

[OPTIONAL] In this subsection, if you want, you can discuss in details the attributes that have been touched by your project problem in details. This has already been mentioned in the Table 1.1.

# Chapter 4

## Conclusion

### 4.1 Discussion

The "My Mood Journal" project is a web-based emotional tracking system designed to encourage mental well-being through daily mood logging and reflection. This application combines HTML, CSS, and JavaScript with Chart.js to create an intuitive and responsive interface that helps users record their emotional states and view insightful summaries over time. The system also includes a simple but effective login authentication mechanism, enhancing privacy and making it suitable for personal use.

Upon launching the site, users are greeted with a login screen that securely verifies access using a predefined username and password. Once logged in, the user interface transforms into an engaging mood selection panel, where individuals can choose from five distinct emotions—Happy, Sad, Angry, Calm, and Joyful—each represented with emojis for intuitive interaction. Users can also write notes describing their emotional experiences, providing a deeper layer of self-awareness and personal insight.

The saved mood entries are stored temporarily in memory for the current session and can be reviewed in the Monthly Review section. This section displays all previous mood logs in a clean, chronological format. More importantly, it includes a bar chart visualizing the frequency of each mood using Chart.js. This helps users understand patterns in their emotional state—an essential step toward self-regulation and mental health awareness.

A unique feature of the project is the “Doctor Support” section, which lists professional mental health contacts for users who might need external support. By integrating this alongside mood tracking, the project bridges the gap between self-help and professional care.

From a technical perspective, the project emphasizes simplicity, interactivity, and user experience. The design is clean and accessible, with responsive layout rules ensuring usability on both desktop and mobile devices. The CSS styling uses modern UI trends like soft shadows, smooth transitions, and animated effects to create an aesthetically pleasing experience. Meanwhile, JavaScript drives all interactivity—from mood selection and form handling to dynamic chart rendering and conditional section toggling.



Although the mood data is currently stored in the browser session only (i.e., it is lost after refreshing), this minimal setup is intentional to keep the system lightweight and easy to use. In future iterations, local storage or database integration could be added to provide persistent storage and multi-user support.

In conclusion, "My Mood Journal" successfully meets its goal of promoting self-reflection and emotional health in a simple, engaging, and user-friendly way. It showcases not only technical competence in web development but also sensitivity to the psychological needs of users. With further improvements like persistent storage and account management, this project could evolve into a fully functional mental wellness companion tool.

## **4.2 Limitations**

While My Mood Journal demonstrates the core idea of a mood-tracking system, it currently has several limitations. The most significant is the lack of a persistent database, meaning that mood entries are not saved once the session ends or the browser is closed. This limits the usefulness of the app for long-term mood monitoring. Additionally, the project does not currently support user authentication, so it cannot manage multiple users or individual profiles. The statistical analysis and visualization of moods are basic and do not offer advanced filtering, monthly trends, or emotional pattern insights. Another limitation is the limited mood options — the application uses only a few predefined moods, which might not fully capture a user's emotional state. Lastly, the current version does not include security features like input validation or protection against malicious access, which are crucial for web applications that handle personal data.

## **4.3 Scope of Future Work**

The current implementation of My Mood Journal serves as a foundational prototype for a mood-tracking application. However, there is significant scope for further enhancement and development. In future versions, this project can be expanded to include a login and registration system with persistent user accounts using a backend database like MySQL. This would allow users to store their mood data across multiple sessions, enabling long-term mood tracking and analysis. Integration with mobile devices through responsive design or a dedicated mobile app could make the journal more accessible and practical for daily use. Additionally, implementing machine learning algorithms to detect patterns in mood trends and suggest personalized mental wellness tips would increase its usefulness. Integration with calendar APIs, reminders, and notifications could help users maintain consistent mood logging habits. Finally, incorporating data encryption and privacy settings would ensure user data is securely stored and handled, making the application suitable for real-world deployment.

# References

- [1] Omid C Farokhzad and Robert Langer. Impact of nanotechnology on drug delivery. *ACS nano*, 3(1):16–20, 2009.
- [2] Uthayasankar Sivarajah, Muhammad Mustafa Kamal, Zahir Irani, and Vishanth Weerakkody. Critical analysis of big data challenges and analytical methods. *Journal of Business Research*, 70:263–286, 2017.
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