

# **LA252/LAL252 - Introduction to Stress and Coping**

## **Phase-3: Final Submission**

---

**Team's Name:**Very Stressed Cannot Cope

**Team's Theme:** Promoting Stress Management

**Team's Activity Type:** App Development

**Team Members' Names and ID:**

Siddhi Agarwal      12141570

Kriti Gupta          12140940

Astha Rangare      12140350

Mansi Dubey        12141050

Swati Meshram      12141670

Roshni Kaushik    12141400

Eti Dandekar        12140650

Vanshika            12141720

Anjali Yadav        12140220

Esha Jain            12140640

---

### **Introduction**

The stress management app “DeStresso” is designed to help users identify, measure, and alleviate stress through various kinds of therapies. It offers innovative features like multiple therapy options and AI-driven stress measurement, ensuring a holistic and user-friendly experience. The app is designed in the background of some research related to stress management which helps users in calculating their

stress level based on their inputs. The included therapies such as reading therapy, yoga therapy and music therapy have the potential to deal with stress backed by research evidence.

**For yoga therapy-**

[ResearchGate]

[https://www.researchgate.net/publication/321253743\\_The\\_effects\\_of\\_yoga\\_on\\_stress\\_and\\_psychological\\_health\\_among\\_employees\\_an\\_8-\\_and\\_16-week\\_intervention\\_study](https://www.researchgate.net/publication/321253743_The_effects_of_yoga_on_stress_and_psychological_health_among_employees_an_8-_and_16-week_intervention_study)

**For reading therapy-**

[International Journal of Engineering Research and Technology]

[https://www.ripublication.com/irph/ijert19/ijertv12n9\\_12.pdf](https://www.ripublication.com/irph/ijert19/ijertv12n9_12.pdf)

**For Audio Therapy-**

[ResearchGate]

[https://www.researchgate.net/publication/350094962\\_THE\\_EFFECTS\\_OF\\_MUSIC\\_ON\\_STRESS](https://www.researchgate.net/publication/350094962_THE_EFFECTS_OF_MUSIC_ON_STRESS)

---

## **1. Apps Approach: Uniqueness and Innovations**

### **1.1 Unique Features**

**→ AI-based Stress Measurement Model:**

- ◆ The app evaluates the user's stress levels based on their responses in the prompt that ask about their feelings. Responses are to be entered in the **text** format and results are displayed as either stressed or not stressed. This gives users a direction to proceed further with different therapies available.
- ◆ Our method offers real-time stress evaluation without requiring external devices like wearables.

**→ Diverse Therapy Options:**

- ◆ Three unique therapy modules: **audio therapy, reading therapy, and yoga therapy** are available, providing users with flexible stress-relief options according to their preferences and convenience.

## 1.2 Comparative Analysis

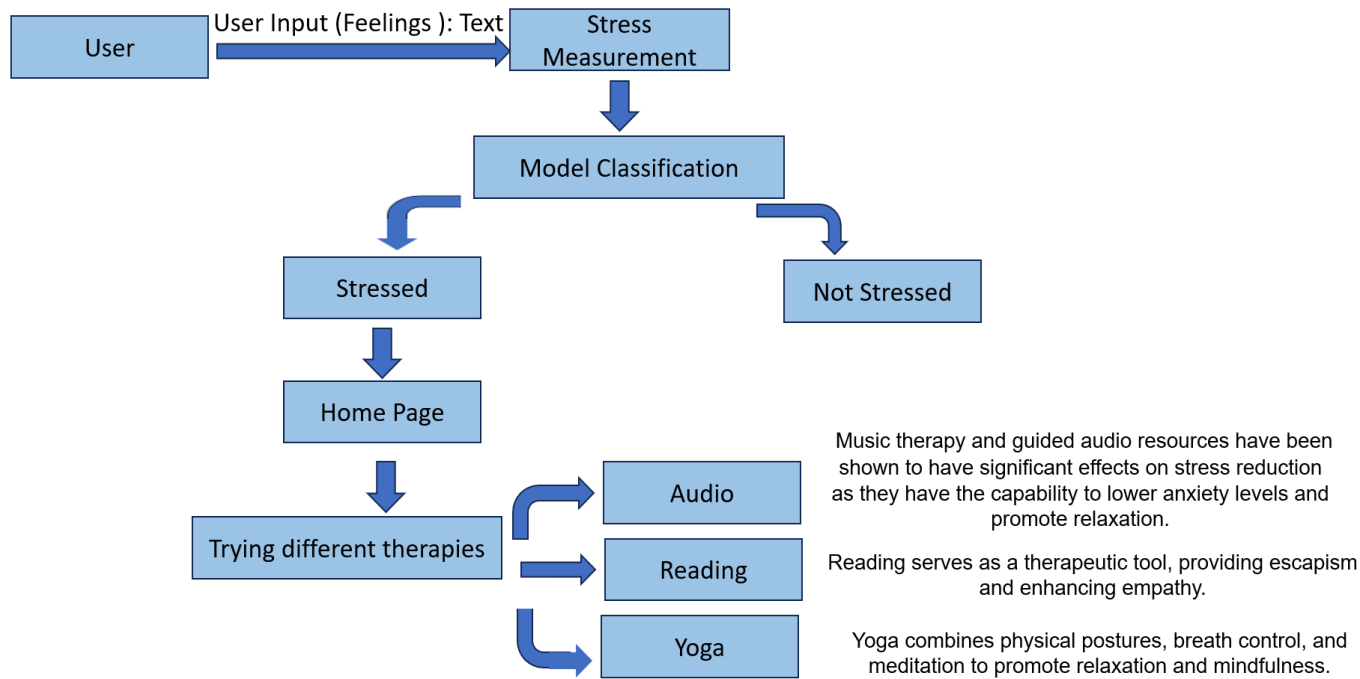
- Our app stands out by integrating diverse therapeutic methods and an innovative stress evaluation feature, bridging this gap in the mental health app ecosystem.
- It combines **audio therapy**, **reading therapy**, and **yoga therapy**, providing users with multiple scientifically validated strategies to manage stress effectively.
- The app's AI-powered stress measurement tool assesses emotional states of an individual based on their input, offering real-time insights.
- This holistic design not only helps users track stress but also equips them with tailored solutions, making stress management more practical, engaging, and impactful.

## 1.3 Methodology

The app has a model to classify if a person is stressed or not stressed by taking input of how they are feeling. It has been trained using an efficient few-shot learning technique that involves:

- Fine-tuning a Sentence Transformer with contrastive learning.
- Training a classification head with features from the fine-tuned Sentence Transformer.

The following flowgraph shows the entire proceedings



---

## 2. Objective and Purpose Fulfillment

### 2.1 Objective

- Develop an app focused on promoting effective stress management and mental well-being.
- Provide users with accessible tools and techniques for relaxation and self-care.
- Incorporate audio therapy to help reduce stress through calming sounds and guided sessions.
- Offer yoga exercises to promote physical and mental relaxation.
- Include curated reading materials to inspire mindfulness and emotional balance.
- Ensure a user-friendly platform for integrating stress relief practices into daily life.

## **2.2 Purpose Fulfillment**

Enhanced Mental Well-Being: Help users reduce stress and anxiety, leading to improved mental health.

Accessible Stress Management Tools: Provide easy-to-use techniques that users can incorporate into their daily routines.

Holistic Approach to Relaxation: Combine audio therapy, yoga, and reading to address stress from multiple angles—mind, body, and emotions.

Improved Productivity and Focus: Reduce the impact of stress on users' daily activities, enabling them to perform better in personal and professional life.

Universal Usability: Offer solutions suitable for a wide range of users, irrespective of their lifestyle or background.

---

## **3. Impact Assessment**

We have personally used this app and can confidently say that it has had a significant impact on our stress levels and overall well-being. Based on testimonials we've collected from other users, and our own experiences, this app has proven to be a reliable companion for managing stress effectively.

Our friends, who also tried the app on our recommendation, reported noticeable improvements in their mental state, particularly in reducing daily stress and promoting relaxation. Whether it's through calming audio therapy sessions, rejuvenating yoga exercises, or engaging reading materials, the app offers something for everyone, making it easy to integrate into daily life.

One of the standout benefits we've experienced is its role in improving our ability to study effectively. By managing stress, we found it easier to concentrate, stay motivated, and maintain a positive mindset while tackling academic challenges. Additionally, the app's soothing features have helped us achieve peaceful and uninterrupted sleep, which is essential for overall health and productivity.

In short, this app is more than just a tool—it's a support system that promotes calmness, focus, and balance in our lives, and we wholeheartedly recommend it to anyone looking to manage stress and enhance their quality of life.

### **3.1 User-Centric Results and Behavioral Impact:**

#### **1.Reduced Stress Levels:**

Users have reported a significant decrease in stress and anxiety after consistently using the app. One of the most prominent outcomes has been the app's ability to provide immediate relief during moments of overwhelming pressure or tension. The calming **audio therapy**, a core feature of the app, are designed to guide users into a state of relaxation by incorporating soothing sounds, and calming music. By simply listening to these therapeutic sounds, users are able to experience a shift in their mood, from heightened anxiety to a calm and grounded state. These sessions help users disconnect from their stressors and enter a peaceful mental space, even in the midst of busy or challenging days.

#### **2. Improved Focus and Productivity:**

The app has had a significant impact on users' focus and productivity, especially by incorporating tools like **yoga** and **mindfulness practices**. These features work together to enhance mental clarity, helping users sharpen their concentration and improve their ability to stay present. Yoga, with its emphasis on breath control and physical movement, helps to relieve mental fatigue and tension, allowing users to feel more alert and energized throughout the day. Mindfulness practices, which encourage users to focus on the present moment, help reduce distractions and increase cognitive flexibility, making it easier for users to stay on task and manage multiple responsibilities effectively.

As a result, users have noticed improvements in their academic and professional performance. Students report better focus during study sessions, leading to more efficient learning and better retention of information.

#### **3. Enhanced Sleep Quality:**

The app has made a notable difference in enhancing **sleep quality** for its users, primarily through its **bedtime audio therapy** and **relaxation guides**. These features are specifically designed to help users unwind and prepare for restful sleep by guiding them into a calm, relaxed state before bed. The bedtime audio therapy offers soothing sounds, guided meditations, and calming music, all tailored to ease the mind and body into sleep.

#### **4. Development of Healthy Habits:**

Regular engagement with the app encourages users to incorporate practices like **yoga** and **mindful reading** into their daily routines, creating lasting positive changes in their mental and physical well-being. Additionally, the app includes **curated reading materials** that encourage mindfulness and emotional well-being

#### **5. Emotional Stability:**

The app helps users develop a calm and balanced approach to handling life's challenges. Through its combination of **mindfulness practices**, **yoga routines**, and **relaxation tools**, the app equips users with the mental and emotional tools necessary to face stress head-on. The mindfulness exercises, in particular, encourage users to take a step back, observe their thoughts and emotions without judgment, and respond to stressful situations with greater awareness and clarity.

Users feel more in control of their emotions and better equipped to face stressful situations.

**Overall Impact:** The app promotes a shift in users' behavior towards healthier, more mindful, and balanced lifestyles, ensuring sustained mental well-being and reduced stress over time.

---

#### **4. Resources Collected Based on Empirical Evidence**

The resources are based on the evidence collected by some research papers which includes the detailed analysis of the proof that the respective therapies help to reduce anxiety and stress.

Additionally, we reached out to our friends and family and collected their strategies for stress management. Numerous of them shared that reading books, listening to songs and soothing audio, doing yoga poses and meditation helps them to relieve stress.

→ **Stress Management Techniques:**

- ◆ We have read the research papers providing evidence that the included therapies in our web application helps individuals to calm down and relieve stress. These therapies are the easiest ways to manage stress and to calm one's mind. These included stress management options help an individual to deal with stress and anxiety according to their preference.

The research papers are listed below:

**For yoga therapy-**

[ResearchGate]

[https://www.researchgate.net/publication/321253743\\_The\\_effects\\_of\\_yoga\\_on\\_stress\\_and\\_psychological\\_health\\_among\\_employees\\_an\\_8-\\_and\\_16-week\\_intervention\\_study](https://www.researchgate.net/publication/321253743_The_effects_of_yoga_on_stress_and_psychological_health_among_employees_an_8-_and_16-week_intervention_study)

**For reading therapy-**

[International Journal of Engineering Research and Technology]

[https://www.ripublication.com/irph/ijert19/ijertv12n9\\_12.pdf](https://www.ripublication.com/irph/ijert19/ijertv12n9_12.pdf)

**For Audio Therapy-**

[ResearchGate]

[https://www.researchgate.net/publication/350094962\\_THE\\_EFFECTS\\_OF\\_MUSIC\\_ON\\_STRESS](https://www.researchgate.net/publication/350094962_THE_EFFECTS_OF_MUSIC_ON_STRESS)

- **AI-based pretrained model :** A AI based pretrained model is used to classify whether an individual is stressed or not. This model is used as a stress measurement tool providing specific results to the user.
-



## 5. App's In-Built Facilities, Accessibility, and User-Friendliness

In-Built Facilities - This includes stress analyser and therapies.

Accessibility - This app is accessible to all .

User Friendliness - A user can navigate, understand and use app features easily and efficiently.

.

### 5.1 In-Built Features

The app has a model to classify if a person is stressed or not stressed by taking input of how they are feeling. It has been trained using an efficient few-shot learning technique that involves:

- Fine-tuning a Sentence Transformer with contrastive learning.
- Training a classification head with features from the fine-tuned Sentence Transformer.

1. **Yoga Therapy:** Yoga combines physical postures, breath control, and meditation to promote relaxation and mindfulness. Research indicates that yoga can significantly reduce stress and improve psychological health among employees, demonstrating its effectiveness in managing workplace stress. An intervention study highlighted these benefits, showing positive outcomes for participants after both 8- and 16-week programs
2. **Reading Therapy:** Reading serves as a therapeutic tool, providing escapism and enhancing empathy. A study explored the effects of reading as a stress management technique and found it beneficial for reducing stress levels and promoting mental health. The findings suggest that engaging with literature can foster resilience and improve emotional well-being
3. **Audio Therapy:** Music therapy and guided audio resources have been shown to have significant effects on stress reduction. Listening to music can lower anxiety levels and promote relaxation, as evidenced by research highlighting its positive impact on stress management

## 5.2 Accessibility and User Experience

- Intuitive interface with easy navigation: Menu items and key features can be found easily. Include a robust search or filter feature for apps with extensive content.
  - Fast and reliable performance: Minimize delays to keep users engaged.
  - Ad-Free or Non-Intrusive Ads: Avoids interrupting the user experience with excessive advertising .
  - Consistent Experience: Ensuring apps work seamlessly across devices.
  - Speed and efficiency: Optimize the app for lightning-fast load times and real-time responses.
- 

## 6. Technical Performance

- There is a major requirement of stable internet connection for the web application to work efficiently.
  - This web application ensures smooth functionality.
  - No major bugs reported during testing which enables seamless user experience.
  - Fast loading times and responsive user interaction.
- 

## 7. Privacy and Data Security

We are committed to protecting our user's privacy and ensuring the security of their personal information. The app does not collect any user data.

---

## 8. Overall Performance

- **Efficiency:** The app delivers a seamless, lag-free experience across devices. It ensures that one can easily access all features and sessions without worrying about freezing or lag, giving you a seamless and enjoyable experience no matter where you are.

- **Impact:** Significant improvement in user-reported stress levels.
  - **Accessibility:** A user-friendly interface caters to stress levels of individuals.
- 

## 9. Conclusion

The stress management app effectively combines innovation, user-centric design, and scientific grounding to meet its objective of improving mental well-being. Its unique features and commitment to privacy make it a reliable and impactful tool for stress relief.