



OPENHACK 24

AI SENTINAL

"EMBRACE EMPATHY, PREVENT TRAGEDY"

AMRITA SCHOOL OF ENGINEERING, CHENNAI
CAMPUS

TEAM DEEP LEARNEES INNOVATES



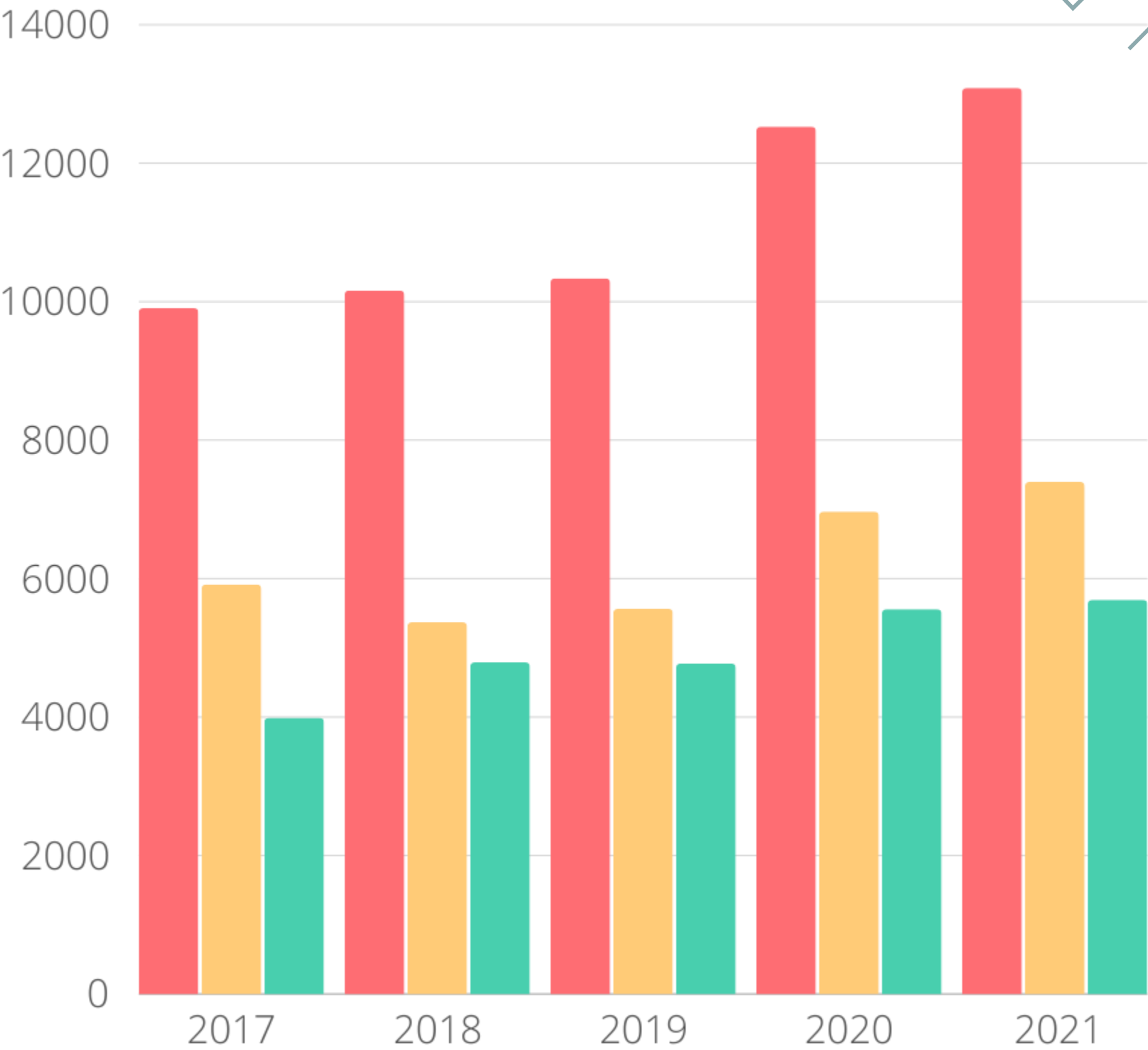
STATISTICS ON DEATH RATES IN EDUCATIONAL UNIVERSITIES

The graph here shows the number of student deaths in 5 years [2017–2021] mainly to the stress and emotions. Other reasons for student deaths weren't inferred for this application.

01 - TOTAL DEATHS

02 - NO. OF BOYS

03 - NO. OF GIRLS





INTRODUCTION

OUR OBJECTIVE

To develop an AI-driven student emotion counselor platform that utilizes advanced machine learning techniques to identify and address emotional distress

OUR GOAL

To reduce the suicidal cases in India and make students to feel a stressless life by listening to their words



METHODOLOGY



By means of :

- Facial recognition
- Textual communication



FACIAL RECOGNISATION

The methodology employs facial recognition algorithms to analyze facial expressions, detecting features indicative of emotions like happiness, sadness, or anger with precision and accuracy.



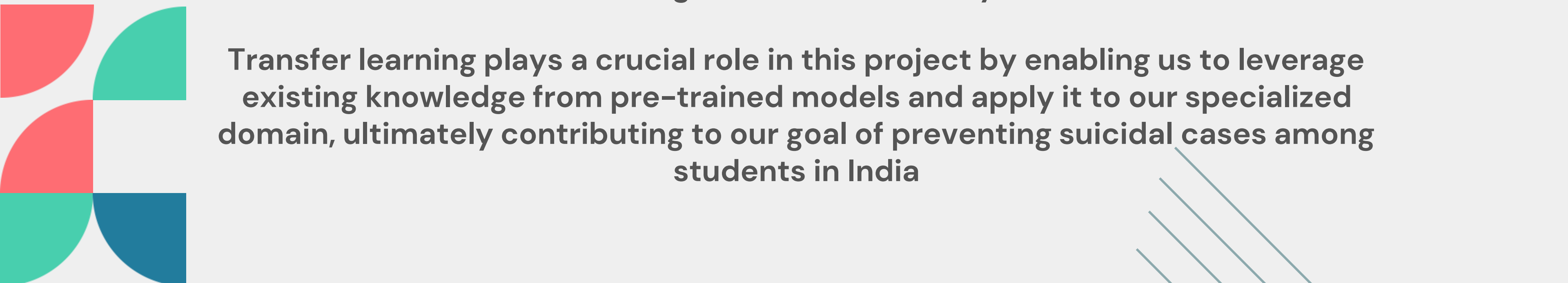
TEXTUAL COMMUNICATION

This technology can help backend systems by analyzing text inputs for emotional cues and responding empathetically using sentiment analysis algorithms.



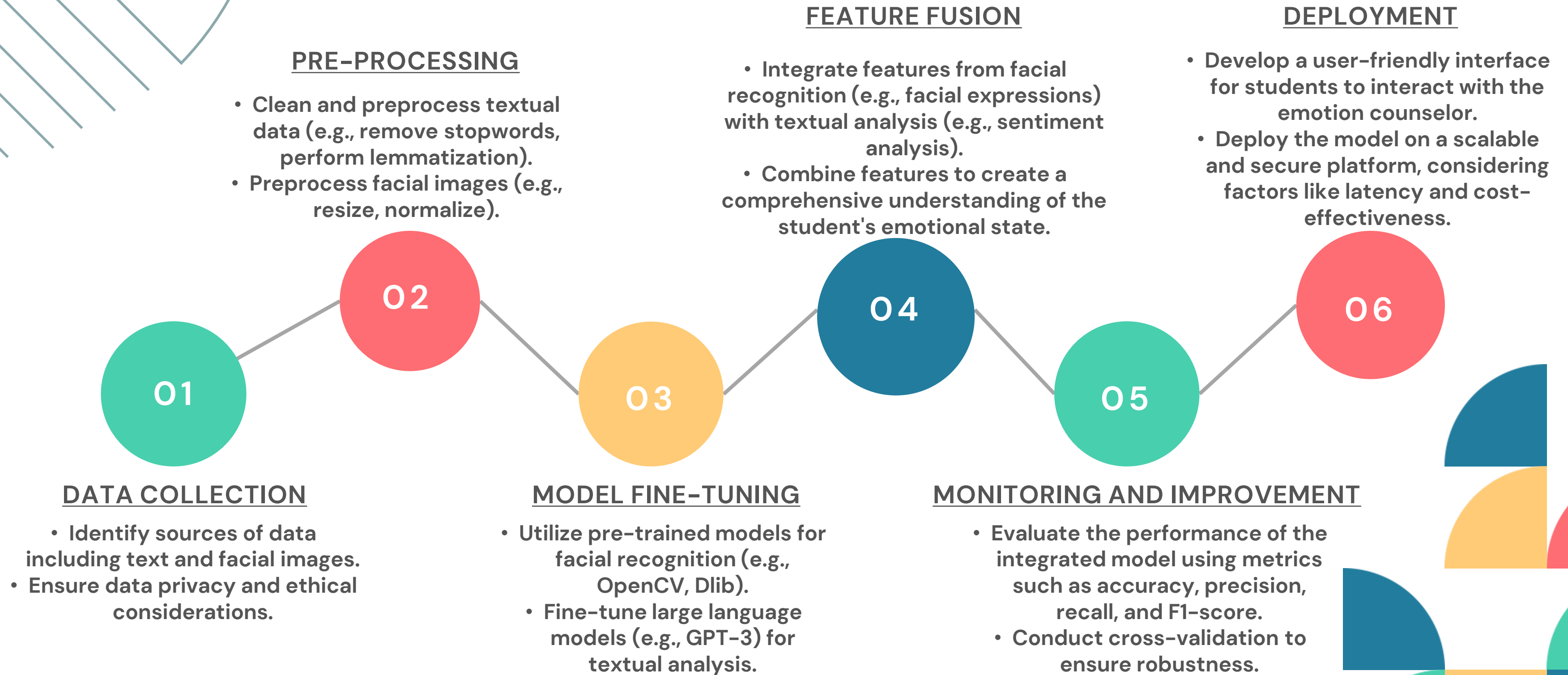
LEVERAGING LLM'S AND TRANSFER LEARNING

By fine-tuning these weights on our specific dataset related to student emotions and suicidal prevention, we can customize the LLMs to better understand and analyze student emotions. This process allows us to adapt the general language understanding capabilities of pre-trained LLMs to our specific task, enhancing the counselor's ability to detect and address emotional distress among students effectively.



Transfer learning plays a crucial role in this project by enabling us to leverage existing knowledge from pre-trained models and apply it to our specialized domain, ultimately contributing to our goal of preventing suicidal cases among students in India

PROJECT IMPLEMENTATION



APPROACH

- Provide accessible and timely support to students facing emotional distress, potentially reducing the risk of suicidal cases.
- Detect signs of emotional distress early, enabling timely intervention and support from mental health professionals

FUTURE PLANS



IMPACT



- Collaborate with mental health professionals, educational institutions, and government agencies to strengthen support systems for student mental health.
- Extend the platform's reach to more students across India and potentially to other regions, addressing a broader range of mental health challenges.