

Human-Computer Interaction during Problem Statement and Requirements Gathering

- **Understand User Requirements:**

- **Strategy:**

- 1) **Interviews:** Conduct interviews with various stakeholders related to the project (e.g., people seeking emotional support, therapists, Mental Health Experts, etc) to gather insights into their emotional well-being.
- 2) **Surveys:** Run surveys and collect data from the public to enhance the AI model adaptability by collecting numerical and subjective data.
- 3) Conduct empathy mapping seminars with HR specialists and therapists to uncover deeper emotional states, gaining insights into users' emotional well-being through their thoughts, feelings, and behaviors.

- **Tools:**

- 1) **Interview:** We can schedule appointments where required, for in-person and Zoom, Google Meet, or Microsoft Teams for virtual interviews where both help for one-to-one conversations with the user.
- 2) **Surveys:** Google Forms, Microsoft Forms, SurveyMonkey, and Zoho are used to collect data that are structured, and which can later be used for Data Analysis and Model Training.
- 3) Miro or Stormboard can be used for virtual empathy mapping sessions

For Instance, Interviewing and surveying various stakeholders can help us identify how the AI system can handle stress and academic demands.

Empathy mapping can reveal hidden emotional triggers among students dealing with anxiety or academic pressure, leading to more targeted emotional support strategies

- **Creating Personas and Scenarios:**

- **Strategy:**

- 1) **Personas:** Creating personas based on the emotional needs of different end users such as therapists, students, Wellness experts, and HR professionals.
- 2) **Scenarios:** Develop user scenarios to visualize how these generated personas interact with the AI system for emotional well-being support.

- 3) Combine quantitative data from AI system's initial test phase with qualitative user feedback. This approach reflects user behavior and emotional states identified by the user.

- **Tools:**

- 1) **Personas:** Xtensio, Miro, or Smaply can be used for creating persona.
- 2) **Scenarios:** Microsoft Visio and Lucidchart can be used to map scenarios.
- 3) UXPressia or HubSpot Persona Generator can be used to create personas that are useful to integrate real emotional state data captured by the ML model.

For example, the system's study of students' emotional patterns may serve as the basis for a persona such as "Anxious Student Sarah," which would suggest particular emotional wellness resources.

- **Conducting task analysis:**

- **Strategy:**

Make use of behavioral demonstrations to model how users could complete challenging activities by collaborating with domain experts like psychologists or wellness specialists. Using this method enables you to comprehend not just the process itself but also the psychological journey and the stressors users may encounter while engaging with the AI system.

- **Tools:**

- 1) To mimic tasks and get feedback on how sensitive tasks are handled, use CogTool or InVision.
- 2) Use IBM Watson Personality Insights to generate dynamic, evolving personas that reflect the emotional development of the user over time.

For Suppose, To simplify procedures and lessen irritation during times of emotional distress, a cognitive tour might emphasize how a user feels when looking for emotional help.

- **Identifying accessibility requirements:**

- **Strategy:**

- Test users' personalities to see if the system can handle their high emotional sensitivity. This means ensuring that the features or interactions inside the framework do not overwhelm emotionally vulnerable users (e.g., panic attack prone).

- **Tools:**

- Usabilla can be used for emotional accessibility and Gaze-based Interaction Tools can be used to measure emotional responses to some elements.

- For accessibility audits, use programs such as WAVE or Axe. Don't forget to include basic features like keyboard navigation, screen reader compatibility, and alternate text for pictures.

For example, Features like "calm mode," which lessens screen stimulation during times of high emotional stress, may arise from testing with emotionally sensitive users.

- **Outlining Usability Goals:**

- **Strategy:**

- Should include objectives for emotional resonance in the usability measurements. These objectives center on the extent to which the system generates favorable emotional reactions, not just in regard to functioning but also in terms of promoting comfort, trust, and sustained user involvement.

- **Tools:**

- Qualtrics XM or Emotive Analytics are used to gather and measure emotional feedback in addition to used data.

- Google Analytics or Mixpanel can be used in tracking usability metrics and monitoring system performance over time.

For suppose the Usability goal for therapists utilizing the system may be to improve client contentment ratings through counseling on emotional well-being in addition to cutting down on job completion times.