

HACK-AI/XR 2025

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Overview

Built for Meta Quest3 using Unity

(tl;dr)

- interactive emotion-scape which helps to ‘untangle’ and unpack your emotional world
- better identify and regulate your feelings, and understand the links between them and the events of your life.
- log emotions and events through a companion mobile app, entries then appear as interactive “emotion packages” in an immersive AR space
- unpack emotions, connect related experiences, and practise brief, research-supported regulation exercises.
- provides a calming ritual to process and externalise your internal world, and encourage emotional progress through emotional linking and reflection.
- supported by evidence from affective research and positive psychology
- over time, your emotional landscape becomes a structured, navigable map that reveals patterns in triggers, themes, and wellbeing

Untangle is an interactive emotion-scape which helps to ‘untangle’ and unpack your emotional world, allowing you to better identify, understand, and regulate your feelings, and understand the links between them and the events of your life. You log emotions and events through a companion mobile app, and these entries then appear as interactive “emotion packages” in an immersive VR space, where you can unpack them, connect related experiences, and practise brief, research-supported regulation exercises. It provides a calming ritual to process and externalise your internal world, and encourage emotional progress through emotional linking and reflection.

The design and features of the app and AR game are supported by evidence from affective research and positive psychology, built upon work in emotional granularity and embodied self-regulation. Over time, your emotional landscape becomes a structured, navigable map that reveals patterns in emotions, themes, and wellbeing. Untangle supports agency, reflection, and healthier self-regulation without acting as therapy or offering diagnoses. It gives users a tangible way to track their inner world and build emotional skills grounded in affective science, mindfulness research, and HCI work on embodiment and engagement.

Track/Challenge

Track #3: Gamification in AR:

Challenge 2 - Everyday AR for Behavioural Transformation & Inclusion

Design an AR experience that gamifies pro-social behaviour in everyday apps to deliver a clear societal benefit and built-in inclusion - then show how you'll measure and sustain that change. Choose a **domain** and define **mechanics** that inform without manipulating. Bake in **inclusion** from day one and set **evaluation** targets. Cover **ethics**, and outline a **business** path. Deliver a **prototype** or **mock-up** and/or **video** (free of choice), your **business case**, evaluation metrics if relevant and an **ethics** brief.

How we address the challenge:

Domain:

Untangle helps the user to improve their emotional identification and regulation in everyday life, an area where behavioural barriers, such as avoidance, stress, emotional overload routinely prevent people from processing their experiences constructively. The project operates at the intersection of AR, affective science, and behaviour change research, using immersive interaction to make emotional reflection more accessible and more embodied.

Behavioural transformation & pro-social benefit:

Untangle gamifies and externalises emotionally healthy habits such as self-reflection, emotional labelling, and healthy coping mechanisms and reframing techniques. These skills have well-established downstream social benefits, including reduced emotional reactivity, improved communication, and greater empathic capacity. By helping users regulate emotions more effectively, Untangle contributes to pro-social functioning in daily relationships and communal environments. The system supports agency rather than passive consumption, encouraging users to make connections between their experiences and to choose evidence-based exercises that align with their goals.

Mechanics that inform without manipulating:

Untangle works by presenting user-logged emotions as interactive objects and offering questions and exercises grounded in research on emotional granularity and regulation. The recommendations are evidence-based suggestions and reflective exercises, not prescriptions, and users retain full control over whether and how to engage. The mechanics encourage insights about the self which are ultimately user-guided, centring voluntary and autonomous practice guided through the embodying features of the system. The system does not use any persuasive nudges, reward loops or pressure, and the tone is reflective rather than corrective/coercive, and all suggestions are framed to enhance user autonomy and understanding.

Built-In inclusion:

The experience supports emotional processing for a broad audience, including those who may not use or be able to use VR. The ultimate plan would be to make all exercises accessible through the companion app, and the VR space to be tailored with different sensory styles (minimalist, analogue, cosy) to avoid overstimulation for users that need it. We would also be able to hold user focus groups to understand the experiences of the people who would be able to benefit most from this app. Safety practices include optional grounding exercises, warnings and disclaimers regarding psychiatric and psychological care, and clear boundaries that the tool is not and does not constitute any part of a replacement for professional therapy. The interface avoids literacy-heavy tasks and provides multimodal input options like voice recording and text input, as well as tactile options for environment interaction. Privacy protections would prevent misuse of sensitive emotional data, and the app would be passcode-locked by default.

Evaluation and sustained change:

The project integrates simple behavioural and wellbeing metrics, such as frequency of emotional logging, improvements in emotional granularity, valence/energy of emotions logged, regulation strategies used, and user-reported changes in emotional clarity, regulation, or level of overwhelm. Qualitative reflections can track perceived relevance and usefulness. Sustained engagement leads to improvements in support over time, and as the 3D emotion-scape evolves, users can recognise patterns in triggers and reactions more skillfully, reinforcing self-awareness as its own motivating outcome.

Project description & evidence backing

Description

Untangle is an XR experience that guides people through ‘untangling’ and understanding their emotions and events, transforming emotional check-ins into a soft, embodied ritual backed by evidence from affective and positive psychology research. Users track their emotions through a companion mobile app, built around a valence–arousal model, the ‘Mood Meter’ to identify their emotions (Barrett, 1998), and at the end of the day, each emotional entry becomes a “package” that appears in the user’s environment, ready to unpack, process, and reflect on.

Each package reveals the tangled emotion, fuzzy until the user goes through each reflective prompt and shapes it into something manageable and understandable. Users can interact with, shape, and sort their emotional objects, and link and categorise them with strings and tags, helping to form larger themes and clusters in three-dimensional space, which is warmly coloured and adaptive to the day-night cycle for comfortable use. The emotional objects help to externalise emotions and allow for embodied regulation (Niedenthal, 2007), helping users to self-reflect in a structured, interactive way, and improving emotional granularity both through the practice of identifying their emotions, as well as linking them together and clustering them in three-dimensional space, giving a better understanding of broader themes and events in users’ lives. The companion AI assistant identifies key words in the user’s emotion and event reports and offers guidance by helping users refine labels or notice patterns, prompting with reflective questions to get deeper at what is causing certain emotions, and will offer from a repository of psychologically backed exercises to help users relax and regulate their emotions.

Over time, Untangle helps the user to build a personal emotional landscape, a spatial, evolving record of the user’s emotional life. This offers the player a break from the constant digital optimisation of everyday life, instead bringing in a gentle ritual that cultivates emotional literacy and regulation, a protective factor against mental-health difficulties (Barrett, 2017; Gross, 2015). By merging daily tracking, embodied interaction, and a cosy, warm aesthetic, Untangle restores the materiality of emotion in a digital age that often strips it away.

Psychological evidence backing

As daily life shifts into digital spaces designed to capture attention and disembody experience, many people lose focus of the subtle bodily cues that generally help them to recognise and describe what they feel, disrupting effective regulation of their emotions (Barrett & Lindquist, 2008). Affective science research shows that people with higher emotional granularity have better daily functioning and lower risk of mood disorders because precise labelling supports more adaptive regulation strategies, making them less overwhelming and easier to work with (e.g. Kashdan & Barrett, 2015) .

The foundation of Untangle, from the mapping of emotions on the ‘Mood Matrix’ grid to the structure of our reflective prompts, is built on empirical research in affective science, emotional regulation, and mindfulness and wellbeing-based exercises and resources. This is done to ensure that the game does not rely on generic wellness rhetoric or cliche advice but instead implements mechanisms that are shown to support emotional granularity and regulation, and encourage our users to self-reflect and better understand their emotional world. Our design goal is to create a system that helps users notice patterns, understand what their feelings are responding to, and interact with those feelings in a way that is sensory, structured, and grounded in evidence rather than advice. The idea of rendering emotions as physical objects came from research on externalisation techniques in clinical and experimental psychology. When feelings are represented materially, users can interact with these emotions and see the links between them

in a much clearer and embodied way, and take a psychological distance to evaluate them more clearly. The cosy aesthetic of popular games like ‘Unpacking’ and ‘LoFi Sessions’ demonstrate how soft spaces can encourage players to engage patiently with small tasks while staying emotionally regulated. We wanted to bring these insights together in a format that feels warm, safe, and grounded in evidence-based principles.

Future plans

Our prototype currently shows how the user logs emotions and events through the mobile companion app and how these entries reappear as interactive emotional objects in the AR Untangle space. The system demonstrates how daily tracking will translate into embodied interaction and processing of emotions and events through the AR space, and our system of reflective questioning based on the emotional prompt and tagging.

The next stage of development would expand on the program’s features and design, to improve the user’s experience by providing a richer, more customisable and connective emotional world. As users process emotions in VR, their emotions will take their place in a developing “emotion scape.” This environment, or the user’s ‘journal’ will visualise links between events and feelings by clustering objects according to shared tags, emotional similarity, or time - these filters and sorting options will be easily selected and edited by the user. Users will be able to reorganise this space to explore themes that recur in their daily life, or particular themes that correspond to different emotions. Over time, the journal system will aggregate emotions and events into day-by-day summaries for emotional analysis, offering a growing record of emotional clustering, prevalence and themes which play a big role in users’ lives. The ‘untangled’ emotion-scape will then sync back to the companion app, giving users access to these clusters and patterns on their phone, which will allow players to track their progress and reflect on how their emotional landscape evolves. The app and VR environment will be able to sync not only with each other but also with Health Connect, mapping information such as user caffeine/alcohol levels, activity, and amount of sleep to help users to understand how their external environment and health may also be playing into their emotional changes. The VR space will also be more customisable, allowing users to tailor the reflective space with adjustable ambient lighting, backgrounds, and a range of soundscapes such as rain, crackling fire, forest ambience, and soft music, to increase calm and immersion. There will be a larger repository of evidence-based exercises that appear in response to the emotions logged during the day, including guided grounding tasks, breathing exercises, perspective-shifting prompts, and short reframing activities informed by research on emotion regulation and positive psychology.

As Untangle grows, all regulatory exercises, reframing cues, and reflective tasks will continue to draw on affective-science research and established psychological principles, and the development process will follow standards relevant to digital wellbeing and mental-health technologies. The system will remain non-clinical, responsible, and equipped with clear pathways to external resources for users who may need additional support.

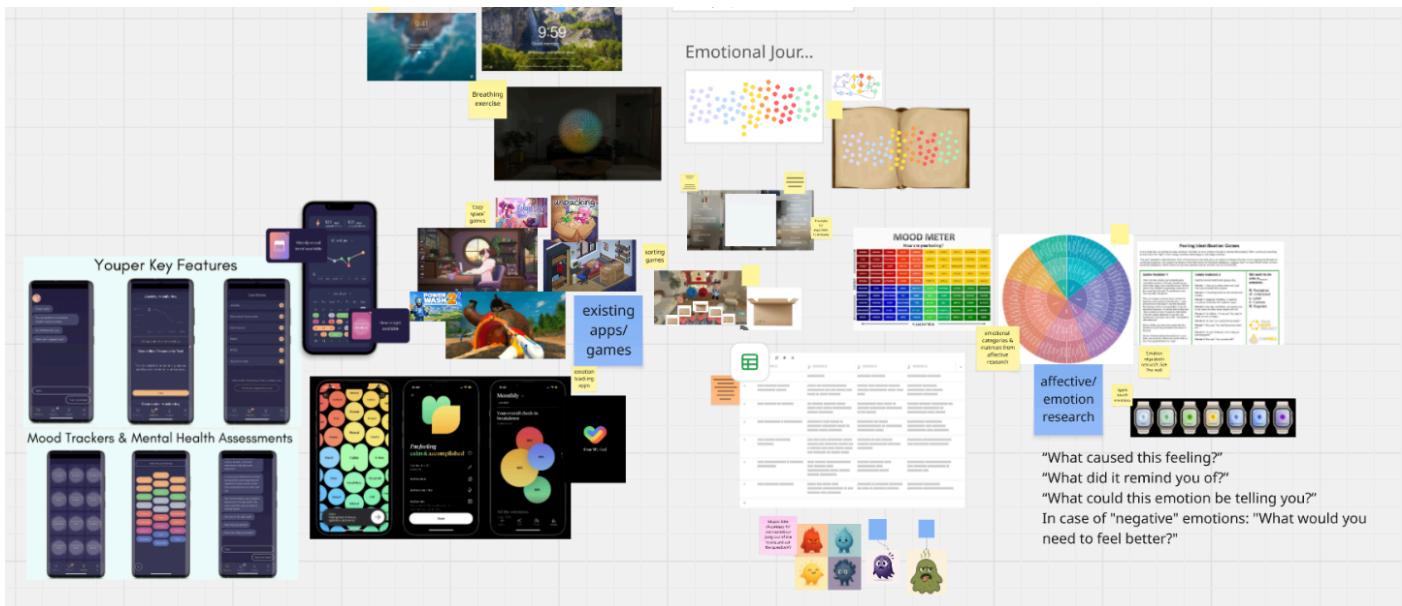
Inspiration & Concept

We took inspiration from current emotional tracking apps on the market, some of which are more backed by psychological evidence than others, and offer different levels of psychological support, journalling features, analysis, etc. We found that we tackle a unique space in the market which enables a more fine-grained tracking and linking in an embodied space.

We were inspired by cosy games that create a 'safe space' and comfortable environment for players to relax and decompress in, enjoying 'Unpacking's idea of allowing the player to slowly in their own time unpack and enjoy cosy aesthetics in a soft and nostalgic space.

We drew from psychological research on affective identification, regulation, and improvement, to build our features of tracking and linking emotional states.

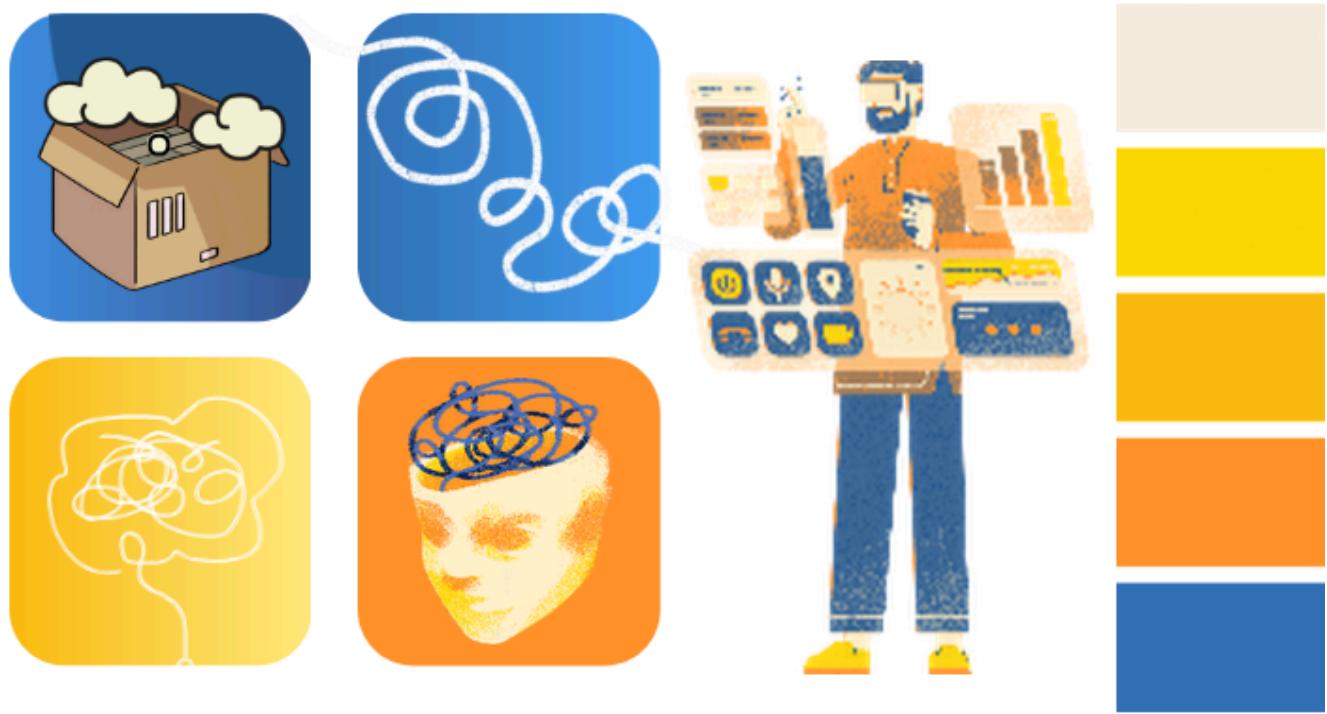
Miro board



Prototypes

DESIGN

For the design, we chose a complementary colour scheme of blue and orange, using minimalist design to produce the prototype. The palette keeps the app neutral and appropriate to a broad audience, and feels



warm and clear with sunny colours and a sketch-like design which evokes writing in a journal.

APP

The app interface includes:

- Dashboard:** Shows a box icon with "Time to untangle" and "You have 2 emotions waiting to be processed. Open your VR space to work through and categorize them." A button to "Open VR Space".
- Log emotion:** Shows a matrix for selecting emotions based on energy (High/Low) and positivity/negativity. A section for "Context (optional)" with categories like Work, Relationships, Self, Family, Health, Social, Creative, Exercise, Sleep, Custom.
- VR Space:** Shows "VR Connected" status. A message: "Time to untangle. You haven't untangled your emotions today. Log onto your Untangle VR space to work through and categorize 2 emotions." A button to "Launch VR Space". Statistics: 94 Total, 64 Untangled, 30 Pending.
- History:** Shows the "History" screen for November 2025. A calendar with numbered boxes indicating entries. A legend at the bottom: Today (orange circle), Has entries (yellow circle), Multiple (red dots), Untangled (green checkmark), To unpack (yellow circle).

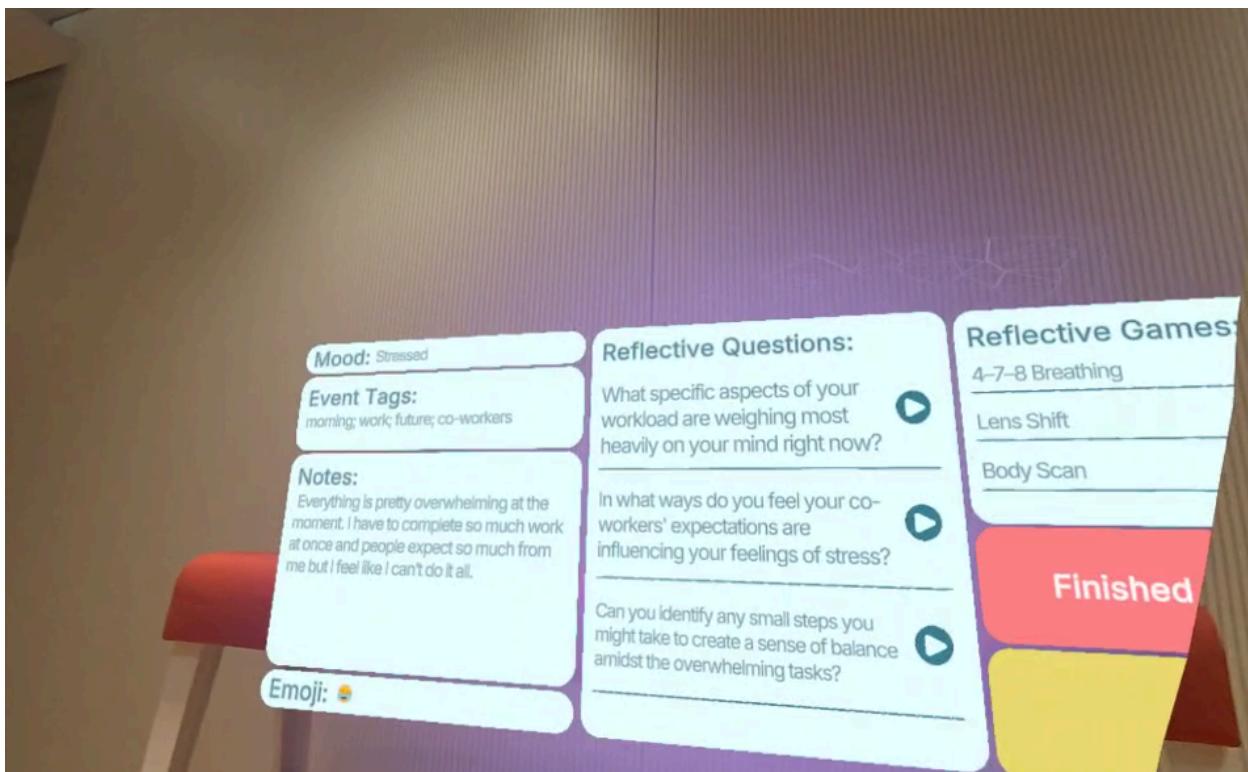
App mockup - emotional logging app

AR SPACE

[Video demo/showcase](#)

High quality video attached with submission

The VR space generates a package for every emotion that has been logged, in a circle around the viewer that they can work through one by one, and respond to reflective questions with saveable recordings. The UI follows a day-night cycle which allows for an adaptive experience comfortable in every environment. In future developments, the emotions will become interactable objects which can be linked in the XR ‘emotionscape’ and navigable in 3D, filterable by emotion and theme. The user will also be able to customise design to fit more minimalist or analogue (e.g. papery) designs, and customise ambient sounds, music, and spaces to make the experience as tailored and inclusive as possible.



Ethics & Business Case

Link to external documents

[Ethics brief](#)

[Business Case](#)