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The Emotions Geogame: Mobile Location-Based Game for Mapping Emotions and Places

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Abstract. *The Emotions Geogame* is a mobile location-based game that invites players to explore the physical environment and enables them to map emotions related to the self-selected places. It is built around the idea of an Alien that visits the Earth and learns about the places and the meaning of emotions. The research concentrates on designing and implementing a game that will enable the players to map emotions and reasons as to what in the environment evokes these emotions. This short paper summarizes the current *Emotions Geogame* concept and shows the mock-up user interface design. It concludes with future directions and implementation of the game for smart mobile devices.

Keywords: location-based game, emotions, places, mapping, alien

1 Introduction

This short paper presents the most recent developments of *The Emotions Geogame,* a location-based geogame designed by an international research team for mapping emotions and their links to the physical environment. Based on previous papers focused on data collection and emotions (Hernandez et al. 2012, Poplin et al. 2023, Sharma et al. 2025a; Sharma et al. 2025b; Poplin et al. 2025), this work highlights recent advances in the game concept, narrative, and design. *The Emotions Geogame* is grounded in the emotions grid and the conceptual model of evocative places and is structured around three core principles: encouraging exploration of real-world spaces through map-based gameplay (location-based game); enabling anonymous, GIS-compatible emotion data collection (data collection); and fostering an immersive and engaging player experience (Immersive and fun). *The Emotions Geogam*e serves a dual purpose. The first is as a citizen science tool to collect large amounts of emotional data. The second is to serve as a reflective tool for players to better understand feelings connected to places. The game is designed for a broad and non-specialized audience, fitting the needs of urban residents and general members of the public. *The Emotions Geogame* is meant to serve as a tool to aggregate responses from users in a scalable and engaging way compared to traditional survey methods. Data patterns may then emerge that can reveal common features that can give insight into future urban planning and design decisions. This short paper concludes by outlining the most recent concepts, story, and premise of the location-based game *The Emotions Geogame* and its most recent implementations.

2 Research Focus and Methodology

The research methodology consists of literature review, conceptualizing and brainstorming, geogame design and test implementation. In the phase of the literature review, the team reviewed literature on emotions and how they are formed, studied evocative and favorite places literature, and reviewed games that are location-based and can be used in the physical environment. This phase led to the selection of the three components of *The Emotions Geogame*. The first one is the idea of a place being evocative and therefore evoking emotions related to that place (Poplin et al. 2023). The characteristics of a place that evoke emotions can be physical attributes, experiences of the place, senses evoked by the place, or values, including memories and stories associated with these places. The second one is the model of emotions that proposes to map them on a grid with two axes: one for the display of pleasantness and the other for the level of energy (Hernandez et al. 2012). Emotions are then organized in a form of four squares on a grid with different combinations of various levels of pleasantness and energy. The third one comes as an inspiration from games such as, for example, *Finch*, in which the player takes care of the bird, a finch, and can select from a variety of missions (Finch 2025). The literature review phase was followed by a set of workshops in which the team continued to design the concept, storyline, premise, and game elements of *The Emotions Geogame*. The workshops consisted of round table discussions breaking down specific mechanics and concepts from games such as *Finch* and group brainstorming of specific mechanics to better elevate the game's design.

3 Results and Discussion

This section summarizes the current state of *The Emotions Geogame* and reviews the formal and dramatic elements of the game. *The Emotions Geogame's* premise consists of a mysterious Alien companion arriving on Earth, blank and emotionless. It relies on the player to learn about emotions, how they manifest, and what places evoke them. Through logging in feelings and exploring the world, the player teaches the alien how to grow, evolve, and understand life.

Formal elements of the game are defined as elements that form the structure of the game. *The Emotions Geogame* world opens with a digital start screen where the player meets their companion, a customizable Alien. This functions as both the entry point and the implicit invitation: the player can log emotions, visit places, and complete missions to help the Alien grow. The geogame is developed for a single player, with the human paired with their personal Alien companion. Two players can temporarily collaborate on cooperative challenges or fitness-inspired goals without merging progression. The player's role is a caretaker-explorer. The Alien observes, reacts, evolves, and occasionally requests experiences. It acts as both an emotional mirror and a quest-giver but remains distinct from the player's own emotional state. The player interaction patterns are mostly single-player vs game system in which the player logs emotions, manages companion needs (XP/emotion-energy), completes missions based on randomly selected emotions or place features, and customizes the evolving Alien.

Additionally, multiple players vs game playing patterns will be added to make the game more immersive, including cooperative missions where two players complete a set of tasks within a time window, and add light fitness-style goals that pair players without requiring intense physical effort. The game's objectives support emotional engagement and light exploration. These missions can be generated using a few different variables: a random emotion prompt, a random environmental feature, or activity-based goals. Fig. 1 shows the mock-ups of the user interface.

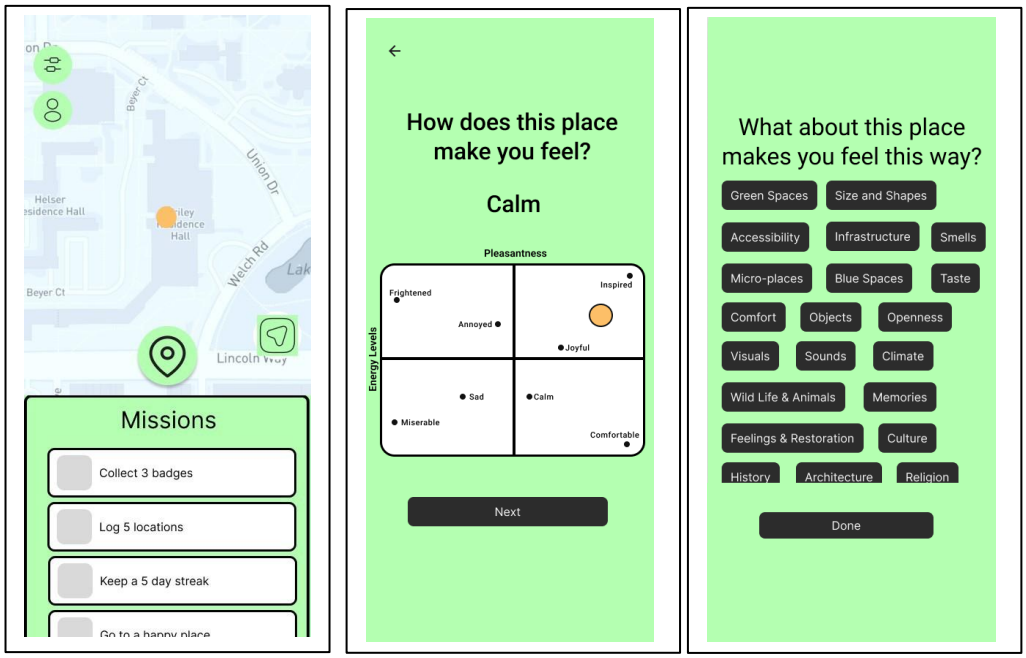

Fig 1. The mock-ups of *The Emotions Geogame* user interface

Dramatic elements have been further developed to define emotional appeal and gameplay better. Challenges revolve around emotional reflection, exploration, and gentle responsibility. The geogame never demands precision or perfection; instead, it provides situations that encourage thoughtful engagement. Types of challenges presented in *The Emotions Geogame* include:

- **Daily emotional logging:** Players must identify and articulate their current emotions. The uncertainty of choosing the "right" emotion creates meaningful reflection without pressure.
- **Companion maintenance:** The alien requires emotional energy (XP) obtained through logging. Players must maintain consistency to keep their companion thriving.
- **Missions and quests:** Randomly generated prompts (emotion-based or place-feature-based) give players mild uncertainty and purpose without forcing them to feel specific emotions.
- **Cooperative challenges:** Lightly time-bound goals push players to sync with a partner, maintaining balance so the system remains emotionally neutral and non-manipulative.

The resources include the XP, which are generated by logging emotions; Cosmetics, which involve changing shapes, colors, clothing, and evolutions; Badges earned by meeting specific, non-biased goals; Emotions Calendar, which is a visual record of daily logs and a motivator for sustained engagement. The story unfolds dynamically rather than as a fixed script. The Alien's reactions, expressions, and evolution depend on the emotional logs over time. The companion changes as XP accumulates, marking chapters of growth. Instead of a strict "plotline," the story emerges through player choices, emotional patterns, and the evolving relationship with the creature.

4 Conclusions

The most recent developments of *The Emotions Geogame* included the expansion of the geogame concept, its story and premise, and the development of a few initial missions. The challenging aspect of making the data collection module part of the game is the possibility of players trying to progress in the game faster by logging more emotions and not being concerned with their accuracy or quality. To prevent possible manipulation, the team developed the following guidelines:

- Emotions logged may influence the companion Alien that may request places, but the player chooses what to log.
- Alien's evolution is based on cumulative XP and not on specific emotions to avoid incentivizing emotional falsification.
- Co-op challenges must not encourage players to engage in unsafe or emotionally manipulative behaviors.

Additionally, *The Emotions Geogame* may inspire players to go to certain places they would otherwise not visit, which can be a positive result of playing *The Emotions Geogame*. Future steps include the development of more specific missions and the implementation of the geogame concept on a smartphone.

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