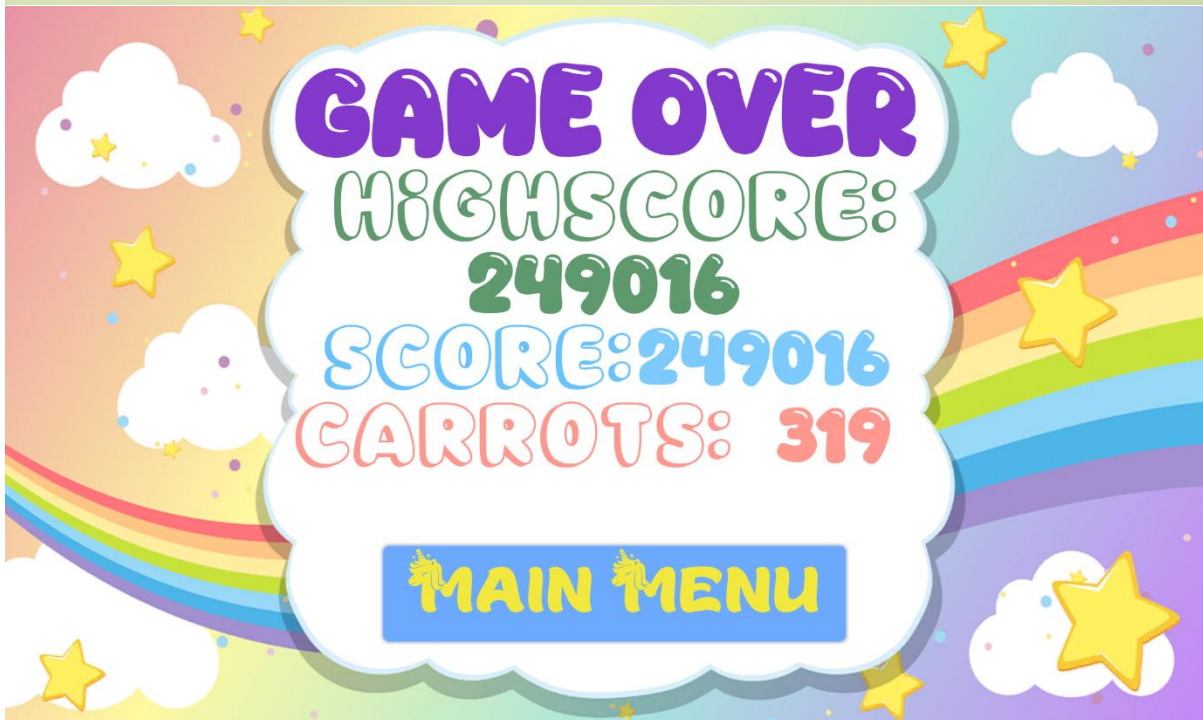


# Rainbow Unicorn Run

## Game Design Document

Veronika Wilson



# Game Feel Analysis

## Robot Unicorn Attack



In this endless runner from 2010, every player action triggers multiple responses – bright particle effects, rainbow trail while dashing, responsive running and jumping animations, satisfying sound effects and dramatic explosions. This combination of audio-visual feedback creates a strong sense of impact and reward. The upbeat song Always by Erasure helps drive the momentum and makes the gameplay feel rhythmic, which encourages a flow state described by Csikszentmihalyi. The game's simplicity is crucial, with only jump and dash mechanics the developers could focus on polishing each interaction instead of spreading effort across complex systems. The game achieves strong game feel thanks to clarity, responsiveness, and expressive audiovisual feedback. This approach reflects Swink's (2008) argument that responsive, multisensory feedback enhances the tactile sensation of interaction, making player actions feel consequential within the game space. It also reflects principles of juicy design, where layered and exaggerated responses transform simple mechanics into satisfying and emotionally engaging experiences.

## Rocking Carriage minigame from Chromatic Ode of Candies and Roses event in Genshin Impact



In the "Rocking Carriage" minigame from Genshin Impact's "Chromatic Ode of Candies and Roses" event, players guide a flower carriage along a vibrant path, collecting blossoms while avoiding obstacles. Each action (collecting a flower or colliding with a vase) elicits immediate and layered feedback: visual effects like sparkles, auditory cues such as chimes or impact sounds, and responsive animations that convey momentum and impact. This multimodal feedback enhances the tactile sensation of control, aligning with Steve Swink's concept of "game feel," where responsive and expressive feedback makes player actions feel consequential.

The game's design emphasizes simplicity, focusing on a single mechanic, which is steering the carriage and that allows for refined polish in its execution. The inclusion of temporary power-ups, such as automatic flower collection or collision immunity, introduces variability and maintains player engagement without complicating controls. Exaggerated and layered responses to player input create a satisfying and emotionally engaging experience, combination of straightforward mechanics with rich sensory feedback that can induce a flow state encourage repeated play and mastery.

## Adventures with Miao Mi: Unicorn Adventures!!



In this children's unicorn-themed workout game, player interaction is supported through bright colour palettes, exaggerated character animations, and cheerful sound design that collectively create an inviting and energetic play environment. Actions such as jumping, collecting items, or successfully navigating obstacles trigger immediate visual and auditory responses, ensuring that player input is consistently acknowledged. The game prioritizes accessibility through simple mechanics and readable visual language, allowing younger players to quickly understand both goals and consequences. Rather than relying on mechanical complexity, the experience derives engagement from expressive audiovisual polish - sparkling effects, funny animations and upbeat music transform routine actions into rewarding moments. This approach aligns with principles of juicy design, in which amplified feedback and playful exaggeration elevate straightforward interactions into emotionally positive experiences.

## Shapeshifter: Animal Run



In *Shapeshifter: Animal Run*, player engagement is driven by the dynamic mechanic of transforming between animals to overcome upcoming terrain challenges. Each successful transformation is reinforced through immediate animation changes, speed adjustments, and distinct audiovisual cues, ensuring that player input is both readable and consequential. This responsiveness aligns with Swink's concept of game feel.

Rather than relying on complex control schemes, the game derives depth from rapid decision-making, requiring players to quickly interpret obstacles and select the appropriate form. The visual clarity of each animal silhouette supports this process by communicating affordances, for example, heavier animals imply strength, while lighter forms suggest agility, which allows players to anticipate how each transformation will affect movement. Expressive particle effects, motion exaggeration, and energetic sound design contribute to a polished sensory layer that elevates otherwise simple mechanics. This approach reflects principles of juicy design, in which layered and amplified feedback transforms routine interactions into satisfying moments. By combining clarity, responsiveness, and rhythmic pacing, the game fosters a continuous action-feedback loop that encourages flow while maintaining accessibility for a broad player audience.

## Nyan Cat: Lost in Space



In *Nyan Cat: Lost in Space*, players control the rainbow-trailing feline in a whimsical endless runner that merges meme culture with classic arcade mechanics. The game's core loop (jumping between platforms, collecting treats and avoiding hazards) is enhanced by a cascade of audiovisual feedback: sparkling particle effects upon item collection, dynamic animations during power-up activations, and the relentless rendition of the original Nyan Cat theme. These elements work together to create a responsive and engaging experience.

The game's design embraces the principles of juicy design, as described by Hicks et al. (2018), by layering exaggerated responses to player actions (such as vibrant visual effects and playful sound cues) that transform simple interactions into satisfying experiences. The inclusion of diverse power-ups, like the Super Nyan and Nyan Wings, introduces variability and encourages experimentation, while the procedurally generated landscapes ensure each run feels fresh. By combining straightforward mechanics with rich sensory feedback and a light-hearted aesthetic, *Nyan Cat: Lost in Space* offers an accessible yet engaging experience that appeals to both casual players and arcade enthusiasts.

# Design Justification

The design of *Rainbow Unicorn Run* was guided by the intention to create a responsive and pleasurable interaction loop that reinforces player agency. When positioned within Swink's (2008) game feel framework, RUR aligns most strongly between real-time control and polish. Continuous movement forward and responsive obstacle avoidance sustain player's engagement, while layered audiovisual feedback enhances the perception of interaction. Although the game incorporates elements of spatial simulation through ragdoll physics and impact responses, the endless runner format inherently prioritizes rapid reaction over complex environmental interaction. This does not weaken the game feel - rather, it reflects a deliberate design emphasis on responsiveness as is characteristic of the genre.

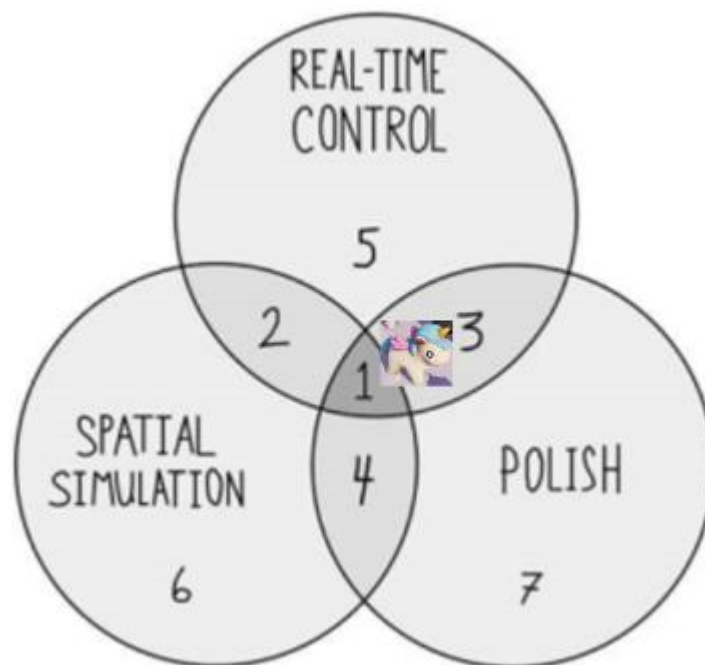


Figure 1. Placement of *Rainbow Unicorn Run* in the framework of game feel by Swink

## Input

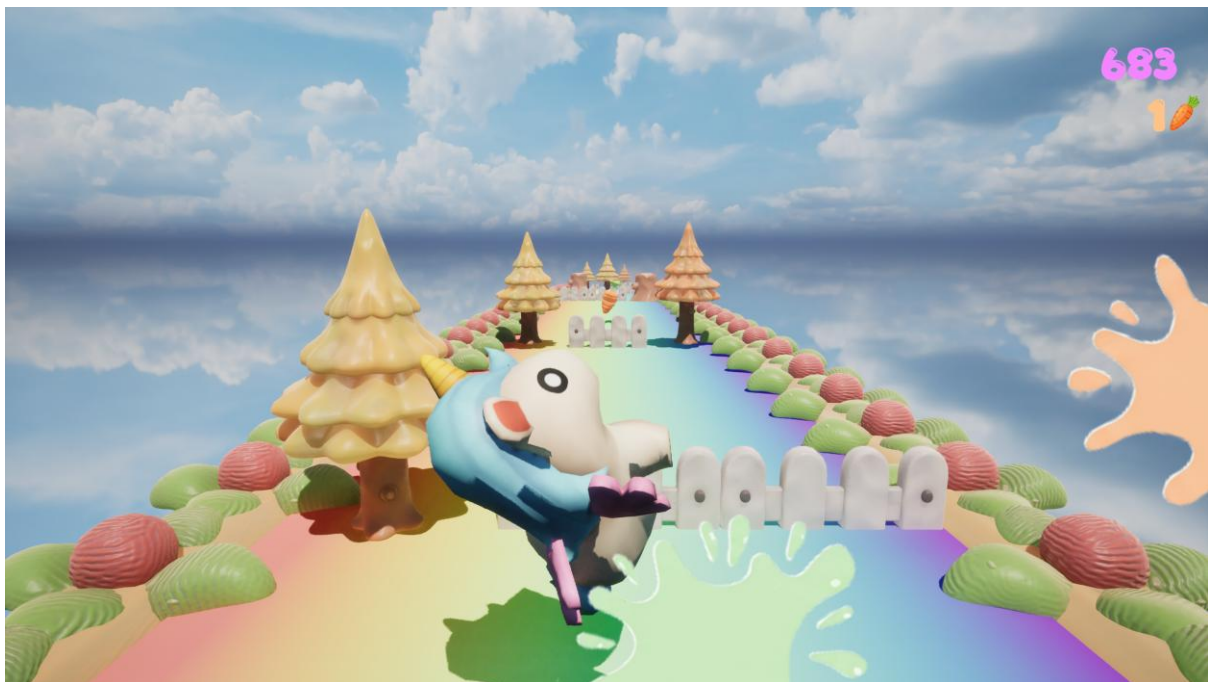
Swink describes real-time control as when the action feels instantaneous in response and continuously ready to accept new input. In *Rainbow Unicorn Run*, the constant forward movement keeps the player engaged while they are facing frequent decisions about how to avoid obstacles – jump or move sideways, both of which require precise timing.

## Jump

Swink notes that animation length can affect perceived control, as prolonged animations may create the impression of input delay. For this reason, the jump animation in RUR was kept short, while still clearly communicating the movement action well – unicorn flaps his wings while in the air before returning to the track under simulated gravity, which ensures that the movement retains physical believability.

## Collision & Death

As is typical of endless runner genre, RUR prioritizes rapid reaction, but it stills relies on convincing spatial simulation. Swink emphasizes that players must feel the physical consequences of actions in simulated space to give meaning to real-time controls. To strengthen the illusion of physical space, collisions with any obstacle trigger an immediate ragdoll response in which the unicorn reacts dynamically to speed and force, sometimes even being thrown off from the rainbow track. Camera shake further reinforces the perception of impact while the screen becomes covered in random colourful splatters accompanied by synchronized splash audio. Splatters change every time in colour, size and placement, making each death event feel unique and impactful. Rather than presenting failure as purely negative, the dramatic feedback reframes death as an entertaining event, helping to reduce frustration and maintain player motivation.



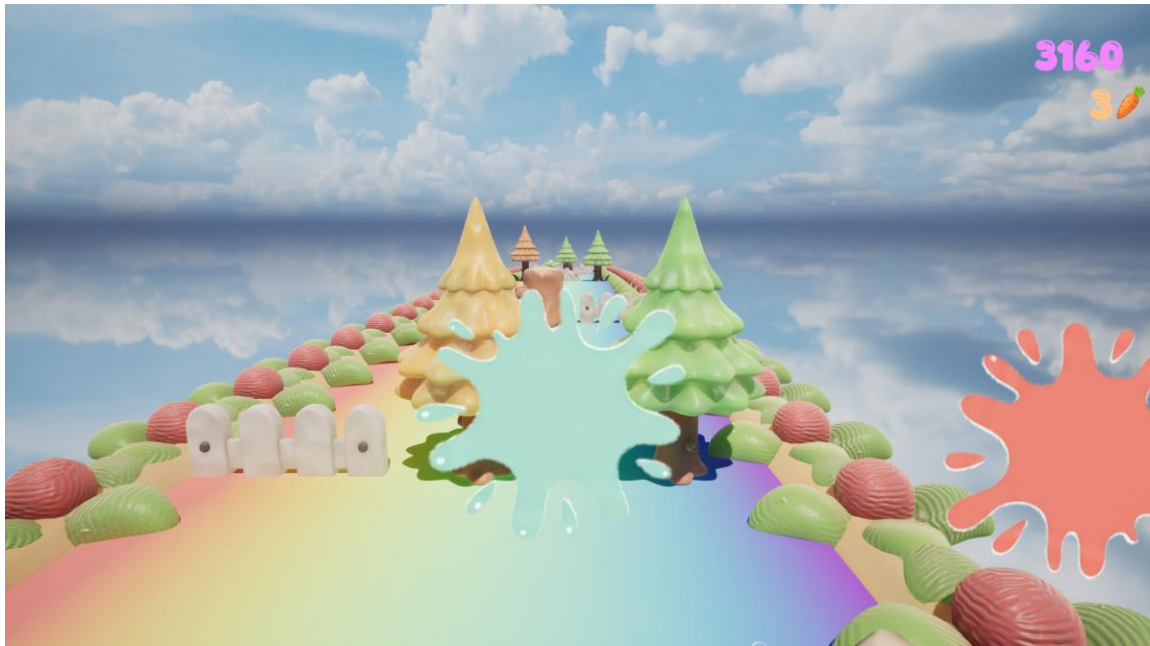


Figure 2. Two examples of end of the game portraying ragdoll death and random splatters

## Accessibility

Accessibility was considered in the design of the control scheme. The game utilizes simple directional inputs and can be comfortably played using one hand, supporting both left-handed (WAD) and right-handed (arrow keys) configurations. Menu navigation is handled through mouse interaction, maintaining consistency with familiar PC control conventions. As noted by Schell (2008), good design seeks to make experiences available to the widest possible audience, simplifying inputs supports this goal by lowering the cognitive and physical demands placed on the player.

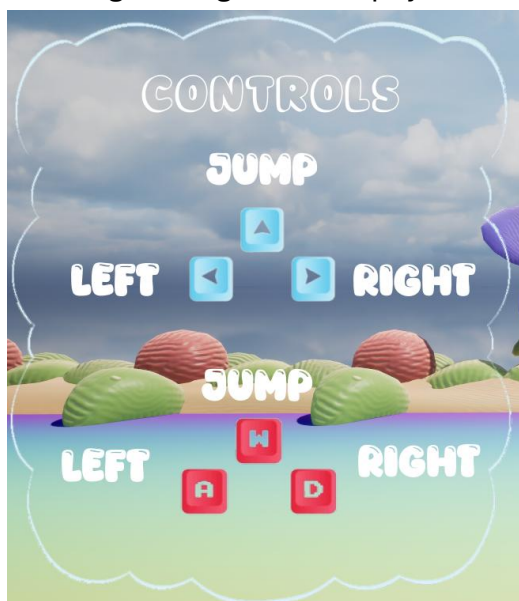


Figure 3. Controls in Rainbow Unicorn Run

## Cosy Gameplay

Within the MDA framework (Hunicke et al., 2004), the game intentionally leans towards the aesthetic of *submission*, offering a low-pressure experience designed for comfort and sustained engagement rather than mastery alone, supported by aesthetics of sensation and fantasy. The visual and mechanical design of *Rainbow Unicorn Run* deliberately positions the game as a playful and cosy reinterpretation of the endless runner genre. Rather than emphasizing extreme speed or punishing difficulty commonly associated with action runners, the experience prioritizes approachability, readability, and light-hearted engagement. Soft colour palettes, stylised characters, and exaggerated feedback contribute to an inviting atmosphere intended to reduce player tension while also providing excitement of an adrenaline rush.

## Cosy World

The sense of cosiness was further supported through deliberate shape language. Rounded forms were consistently favoured over sharp or angular geometry across characters, environmental assets, and interface elements. According to Lidwell et al. (2010), curved shapes are often perceived as safer and more approachable, whereas sharp forms can evoke tension or threat. By employing soft silhouettes and circular motifs, the visual design subtly communicates psychological comfort, reinforcing the game's low-pressure atmosphere.



Figure 4. *Cosy Fantasy World*

Environmental motion was also used to enhance immersion without increasing cognitive load. The slowly moving sky introduces gentle ambient feedback, preventing the world from feeling static while maintaining the calming tone of the experience. This

aligns with Swink's (2008) notion that subtle environmental responsiveness contributes to the sensation of a living world, strengthening player presence within the game space.

Additionally, the rainbow track was intentionally curved downward so that its endpoint remains outside the player's field of view. This design choice serves two purposes. First, it supports immersion by implying spatial continuity beyond what is immediately visible, a technique commonly used to create the illusion of a larger world. Second, it introduces mild unpredictability, encouraging sustained attention as players cannot fully anticipate upcoming obstacles. Rather than generating stress, this controlled uncertainty promotes engagement while preserving the game's cosy emotional tone.

### Audio

Audio in *Rainbow Unicorn Run* was designed to enhance feedback and emotional engagement through principles associated with juicy audio. Research suggests that juicy audio improves player experience by emphasising events, strengthening feedback, and shaping emotional impact through coherent sound design. Upbeat background music supports forward momentum, while contrasting game-over music clearly communicates failure without feeling overly punitive. Moment-to-moment actions are reinforced with exaggerated sound effects, most notably the "weeeee" jump vocalisation, which includes probabilistic variation to reduce repetition and prevent auditory fatigue.

A dynamic processor was applied to the jump sound to maintain clarity within the overall mix, ensuring that important feedback remains perceptible without overwhelming other audio layers. This aligns with the idea that juicy audio should be balanced and fit its context rather than dominate the soundscape (Hicks et al., 2024). Upon collision, a synchronised splash sound paired with colourful splatter visuals provides multimodal reinforcement, augmenting the perceived weight of the event and contributing to a more satisfying player response. As identified in juicy audio research, such layered and coherent feedback can enhance immersion while improving the overall sensation of interaction.

### Juicy Framework

RUR was measured against the Juicy Framework (Hicks et al., 2018) to assess the strength of its game feel and player feedback systems.

Juicy Framework	Robot Unicorn Run
Consistency	Player actions reliably produce expected responses, which is reinforcing

	predictability and strengthening perceived control.
World-ness	The world game is not realistic, but it maintains internal coherence of stylised, whimsical fantasy world.
Replayability	Increasing speed throughout the game, highest score chasing and collectible characters encourage repeated play. Depth emerges through execution mastery rather than mechanical complexity, aligning well with endless runner conventions.
Rewards	Rewards operate at multiple levels, from immediate audiovisual feedback with pickups or collision with obstacles that make even death fun and rewarding to longer-term progression through high scores and possibility to unlock characters of different colours.
Depth	The game mechanics are simple to learn, but the growing speed throughout the game and the random generation of obstacles make every gameplay fresh and challenging.
Confirmatory Feedback	Every interaction is acknowledged through animation, sound or visual effects, ensuring that player input feels consequential within the game space.
Multimodal Feedback	Feedback is delivered across multiple sensory channels including animation, audio, particle effects, and camera responses.
Relevant Feedback	Movement, pickups and collisions, each provide information that supports player decision-making.
Explicit Feedback	Critical game states are communicated clearly through UI elements such as score displays and game-over messaging, ensuring that players receive unambiguous information about performance and progression.
Accessible	Clear visual language sound cues and readable reactions reduce cognitive load, allowing players of varying skill levels to interpret events quickly.
Overwhelming	Juicy elements are moderated to avoid sensory overload. Feedback enhances

	engagement while remaining aligned with the game's cosy emotional tone.
Responsiveness	Immediate input-response relationships strengthen game feel. Actions feel tightly coupled with on-screen outcomes.
Natural	Controls correspond intuitively to player expectations (e.g., jumping to avoid hazards, unicorn collecting/eating carrots)
Complimentary Game Mechanics/Elements	Visual style, sound design, and feedback intensity work together to communicate a unified emotional experience, demonstrating strong aesthetic cohesion.
Fantasy	The whimsical unicorn fantasy supports playful exaggeration.
Visceral	Rather than pursuing high-intensity stimulation, the game delivers a softer form of visceral feedback that promotes comfort and whimsical joy while maintaining engagement.
Mastery	Increasing speed and obstacle density encourage players to refine timing and spatial awareness, creating a satisfying progression from competence to mastery.
Meaningful Actions	Failure is clearly communicated, ensuring that player decisions carry perceivable consequences that reinforce engagement.
Exaggerate	Camera shake, colourful splatters and ragdoll "death" amplify state changes, making outcomes immediately readable without disrupting the game's soft tone.
Focus or Attention	Effects such as camera shake and random colourful splatters accompanied by fitting audio effectively direct player attention toward critical gameplay moments.
Highlighting	Important interactions are visually prioritized, helping players process information rapidly during fast-paced gameplay.
Ambient Feedback	Energetic and fun background music supports the sensation of forward momentum while reinforcing the game's inviting atmosphere.

# Game Evaluation

Playtesting was conducted to evaluate whether the intended game feel was successfully communicated to players. Feedback suggests that the experience effectively achieved its goal of being approachable and engaging. Participants frequently described the gameplay as “addictive,” “cute,” and “fair,” indicating that the balance between challenge and accessibility was largely successful.

Notably, several players highlighted the audiovisual design as a standout feature. Comments such as “the audio design was awesome” and “there was great synchronisation between audio and visuals” suggest that the multimodal feedback contributed positively to perceived responsiveness. This aligns with Swink’s assertion that layered sensory feedback strengthens player perception of agency.

The death sequence was also well received, with participants reporting that the splatter effects made the fail state clearly recognisable and “polished.” Interestingly, some players noticed the splatters more than the camera shake, suggesting that highly visible feedback may have greater perceptual impact than subtle screen movement. This insight highlights the importance of prioritising clarity when designing moment-to-moment feedback.

Shop interactions were generally viewed positively, with players describing prices as fair and progression as achievable. However, one participant suggested increasing price scaling across skins, indicating an opportunity to introduce stronger long-term motivation structures.

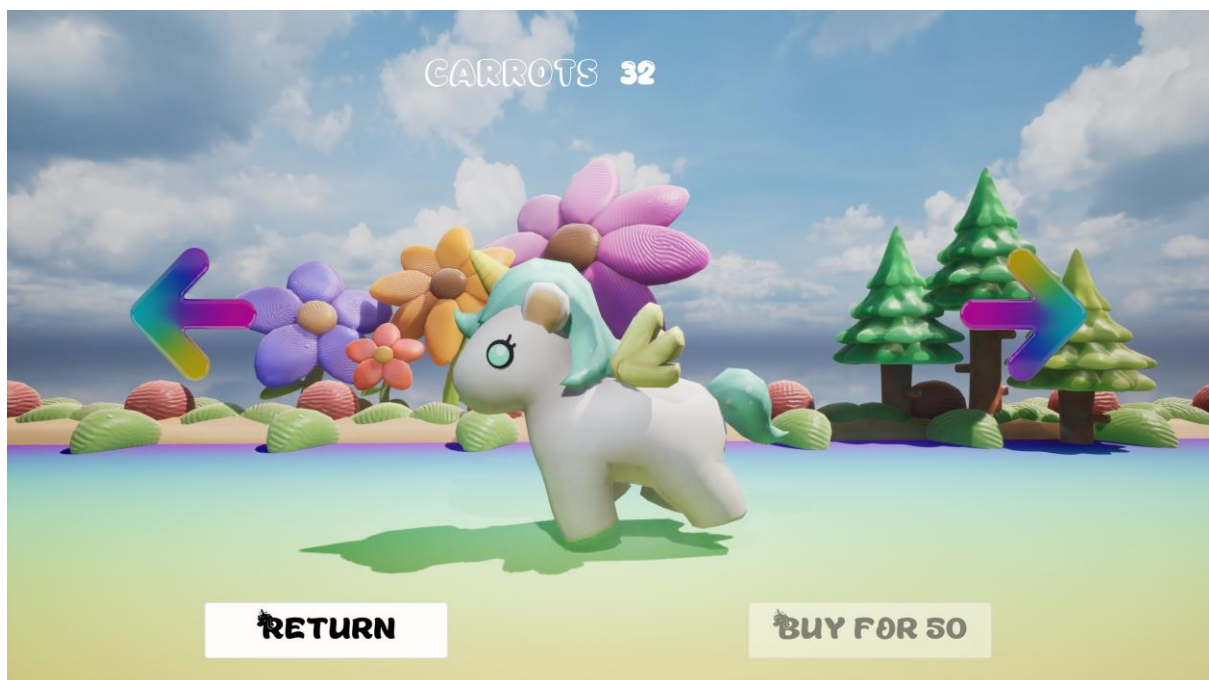


Figure 5. The most popular unicorn in the shop purchased by majority of play testers.

Despite the overall positive reception, the playtest also revealed areas for improvement. One player noted that the music and sound effects were somewhat loud, suggesting the need for adjustable audio settings to improve accessibility. Another recommended introducing temporary power-ups similar to ones in Nyan Cat game, such as invincibility or obstacle-clearing abilities, which could diversify gameplay and enhance excitement.

Some participants expressed a preference for faster speed ramping and higher difficulty. This observation suggests that while the game successfully supports “easy fun” as described by Lazzaro, it could further strengthen mastery-driven engagement by increasing difficulty progression.

Overall, the feedback indicates that *Rainbow Unicorn Run* successfully delivers a responsive and pleasurable experience. However, iterative refinement (particularly in progression systems, audio UI and difficulty scaling) could further enhance game feel.

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