# **Creature Chariots: The Skyborne Gauntlet - Detailed Game Design Document (MVP)**

Version: 1.1 (Updated for PC Release)

Date: July 4, 2025

Project Leads: [Your Name] & Jay

Engine: Godot Engine 4 (3D)

Target Platform: PC (Steam)

## **1. Game Overview**

Working Title: Creature Chariots: The Skyborne Gauntlet

Tagline: Tame the wild, master the winds, and race for glory in the skies!

**Concept:** "Creature Chariots: The Skyborne Gauntlet" is an exhilarating, high-speed fantasy racing game that blends the intense, obstacle-dodging mechanics of *Star Wars: Episode I – Racer* with a deep, rewarding creature breeding and management meta-game inspired by *Sonic Adventure 2's Chao Garden*. Players will pilot fantastical, magically-enhanced chariots pulled by unique, powerful creatures across treacherous, visually stunning sky-tracks. Beyond the thrill of the race, players will nurture, breed, and train their creature companions in a serene "Sky Sanctuary" to unlock new abilities, improve performance, and forge an unbreakable bond, creating a compelling loop of action and long-term progression.

**Genre:** Arcade Racing (Primary), Fantasy, Creature Management, Simulation (Secondary).

**Target Audience:**

* PC gamers seeking fast-paced, engaging racing experiences with a unique twist.
* Players who enjoy creature collection, breeding, and nurturing mechanics with a clear impact on gameplay.
* Individuals looking for a game that offers both immediate action and satisfying long-term progression/customization.
* Those who appreciate vibrant 3D graphics and intuitive PC controls.

Unique Selling Proposition (USP):

The game's core uniqueness lies in its seamless and meaningful integration of two distinct, highly engaging gameplay loops:

1. **Fantasy Podracing Reimagined:** Experience the high-speed, physics-driven thrill of racing through imaginative, dangerous fantasy sky-environments, propelled by powerful magical creatures.
2. **Strategic Creature Management:** A dedicated, visually appealing mini-game where players acquire, nurture, train, and "fuse" their creature companions. The performance and unique traits of these creatures directly translate into their racing prowess, creating a deep, evolving connection between the player and their stable of beasts. This dual focus provides significant depth and long-term engagement beyond typical racers.

## **2. Core Gameplay Loops**

### **2.1. Main Racing Loop**

This loop focuses on the high-octane action and skill-based piloting.

1. **Race Selection:** From the main menu or a world map, players select an available race. Races will have varying track layouts, environmental hazards, and difficulty levels.
2. **Pre-Race Preparation:** Players choose their chariot and select a creature from their "Sky Sanctuary" stable. They can also apply temporary buffs (if implemented later) or perform quick repairs.
3. **The Race:** Players engage in a competitive race against AI opponents. This involves:
   * **High-Speed Navigation:** Piloting the chariot through complex, winding sky-tracks.
   * **Obstacle Avoidance:** Dodging static environmental hazards (e.g., floating debris, ancient ruins) and dynamic track elements (e.g., shifting winds, geysers).
   * **Boost Management:** Strategic use of a limited-resource boost for speed bursts.
   * **Damage Management:** Avoiding collisions to maintain chariot integrity and performance.
   * **Opponent Interaction:** Outmaneuvering AI racers.
4. **Post-Race:** After completing a race (regardless of placement), players view results, receive rewards (in-game currency, creature "essence," potential creature eggs, new chariot parts), and track their progress on the world map.

### **2.2. Creature Sanctuary & Management Loop**

This loop provides the long-term progression, customization, and emotional connection.

1. **Creature Acquisition:** Players obtain creature eggs or "essence" primarily as rewards from winning races, completing specific challenges, or through special in-game events.
2. **Hatching & Nurturing:** Eggs are brought to the "Sky Sanctuary" to hatch. Once hatched, players can perform basic interactions (e.g., "petting" for affection, simple feeding with "Sky-Berries" for minor stat boosts/affection).
3. **Training & Upgrading:** Using collected "essence" or "training items" (obtained from races), players invest in their creatures to permanently improve their core racing stats (Speed, Handling, Durability).
4. **Visual Evolution (Simple):** As a creature's stats improve or it undergoes "Essence Fusion," it gains subtle, incremental visual changes (e.g., a slight glow, more prominent magical markings, subtle growth in size or muscle definition).
5. **Breeding / Essence Fusion:** Players can combine two creatures in a "Fusion Chamber." This process allows for the transfer of desired traits or the consolidation of essence into a stronger single creature, or a new egg that inherits combined performance potential. This is a simplified "breeding" mechanic for the MVP, focusing on stat progression rather than complex genetic trees.

## **3. Core Mechanics (MVP Focus)**

The MVP will focus on delivering a complete, enjoyable, and stable core loop for both racing and creature management.

### **3.1. Racing Mechanics**

* **Chariot Control (Player Input):**
  + **Acceleration:** Chariot has a base forward speed. Player controls a "throttle" (e.g., a dedicated key press, mouse wheel, or gamepad trigger) to increase/decrease speed within a range.
  + **Steering:** Left/right input (e.g., A/D keys, Left/Right Arrow keys, or gamepad stick) for horizontal movement and turning.
  + **Boosting:** A dedicated "Boost" button (e.g., Spacebar, Shift key, or gamepad button). When pressed, the chariot gains a significant, temporary speed burst.
    - Consumes "Arcane Energy" (a resource displayed on HUD).
    - Arcane Energy regenerates slowly over time.
    - Visual effect: Intense magical glow/trail from the creature/chariot.
  + **Air Control (Simple):** When airborne (e.g., off a ramp or over a gap), slight left/right steering adjustments are possible. No complex pitch/roll control in MVP.
* **Physics & Collision:**
  + **Arcade Physics:** Prioritize fun and speed over realism. Chariots should feel responsive and powerful.
  + **Collisions:** Bumping into track boundaries or static obstacles will cause a speed reduction and damage.
  + **Airborne Traversal:** Chariots will automatically glide/levitate across gaps. This is visually represented by a magical effect specific to the creature type.
* **Chariot Types (MVP: 3 distinct models):**
  + **The Swiftwing:** Balanced stats (Speed: Medium, Handling: Medium, Durability: Medium). Default starter.
  + **The Stormbreaker:** Speed-focused (Speed: High, Handling: Low, Durability: Medium). Visually sleek, aerodynamic.
  + **The Earthbound:** Durability-focused (Speed: Medium, Handling: Medium, Durability: High). Visually sturdy, armored.
  + *Note:* Chariots are primarily visual skins and modify base stats. Creature stats are the primary driver of performance.
* **Creature Types (MVP: 3 distinct visual models):**
  + Each creature type will have a unique visual appearance and associated magical gliding effect. Their racing performance is primarily determined by their trained stats, not their base type.
  + **Sky-Serpent:**
    - **Visual:** Long, serpentine body, feathered or crystalline wings (for natural flight), glowing eyes. Elegant and agile.
    - **Glide Visual:** Natural, graceful flight/gliding animation.
  + **Gale-Hound:**
    - **Visual:** Muscular, canine-like, with wind-swept fur, sharp claws, and powerful legs. Looks like a ground-runner.
    - **Glide Visual:** When airborne, a visible aura of swirling wind magic surrounds it, allowing it to "surf" or "dash" across gaps. Subtle wind trails.
  + **Stone-Beast:**
    - **Visual:** Stocky, heavily built, with a rocky hide, glowing runic patterns embedded in its skin, and powerful, earth-shaking limbs. Looks like a heavy-hitter.
    - **Glide Visual:** When airborne, the runic patterns flare brightly, creating a temporary anti-gravity field or a burst of earth/air magic that allows it to levitate powerfully across the gap. Heavy, deliberate movement.
* **Track Hazards:**
  + **Static Obstacles:** Floating rock formations, ancient ruined structures, energy pylons, dense magical flora. Collision with these causes damage and speed reduction.
  + **Environmental Hazards:**
    - **Wind Gusts:** Sections of the track where strong winds push the chariot sideways, requiring corrective steering.
    - **Energy Vents:** Geysers of magical energy that, if hit, cause minor damage or a temporary speed debuff.
    - **Mist Zones:** Areas of dense mist that reduce visibility.
* **Damage System:**
  + **Durability Bar:** A visual bar on the HUD representing the chariot's health.
  + **Impacts:** Collisions with obstacles or track boundaries reduce durability.
  + **Performance Degradation:** As durability decreases, the chariot's top speed and handling are gradually reduced.
  + **No Destruction (MVP):** Chariots do not explode or become unplayable mid-race. They simply become very slow and difficult to control at low durability.
  + **Post-Race Repair:** All damage is repaired automatically after a race, but players can pay currency for "instant repairs" if they want to immediately re-race with full performance.
* **AI Opponents:**
  + **Number:** 3-5 AI opponents per race.
  + **Behavior:** Basic waypoint following with simple obstacle avoidance. Varying skill levels (e.g., some AI will make more mistakes or be slower).
  + **Visuals:** Each AI opponent will have a unique chariot and creature combination, visually distinct from the player's.
* **Tracks (MVP: 3 Unique Environments, 1-2 tracks per environment):**
  + **"Cloudspire Ascent":** A track winding through towering cloud formations and ancient sky ruins. Features verticality, tight turns, and sections with strong updrafts/downdrafts.
  + **"Sunken Mire Speedway":** A track through a swampy, overgrown ancient forest, featuring mud pits (slow zones), vine obstacles, and bioluminescent flora. Focus on environmental hazards and tight, winding paths.
  + **"Crystal Canyon Dash":** A track carved through a canyon of massive, glowing crystals. Features narrow passages, reflective surfaces, and energy beam hazards.

### **3.2. Creature Sanctuary & Management Mechanics (MVP)**

* **The Sky Sanctuary:**
  + A dedicated, visually appealing 3D hub area (a floating island biome) where all player-owned creatures reside.
  + Players can navigate this area freely (e.g., third-person camera, click-to-move, or WASD).
  + Different interactive structures within the Sanctuary (Hatching Nest, Training Altar, Fusion Chamber).
* **Creature Display & Interaction:**
  + All owned creatures roam freely within the Sanctuary.
  + Players can click/tap on a creature to bring up a small info panel showing its stats, type, and current affection level.
  + **"Petting":** Clicking and holding on a creature will initiate a "petting" animation, increasing its Affection stat slightly.
* **Creature Acquisition:**
  + **Eggs:** Awarded randomly from winning races (rarity based on race difficulty and player placement). Eggs have a visual representation.
  + **Essence:** Small items (e.g., "Gale Dust," "Stone Shards," "Serpent Scales") dropped from races, used for creature upgrades.
* **Hatching:**
  + **Hatching Nest:** A structure in the Sanctuary. Players place an egg in the nest.
  + **Timer:** Eggs have a real-time hatching timer (e.g., 5 minutes to 1 hour). This timer can be sped up using in-game currency or a rewarded ad.
  + **Hatch Animation:** A simple visual effect as the egg cracks and the creature emerges.
* **Creature Stats:** Each creature has three core racing stats and one meta-stat:
  + **Speed:** Affects the chariot's maximum speed and acceleration.
  + **Handling:** Affects the chariot's turning responsiveness and stability.
  + **Durability:** Affects the chariot's damage resistance and how quickly it degrades.
  + **Affection:** (Meta-stat) Increases through petting and feeding. Higher affection might unlock minor cosmetic changes or special "moods" (no direct racing impact in MVP).
  + Each stat has a maximum level (e.g., Level 10).
* **Training & Upgrading:**
  + **Training Altar / Essence Infuser:** A structure in the Sanctuary.
  + Players select a creature and then choose which stat to upgrade (Speed, Handling, or Durability).
  + Upgrading consumes specific "essence" items and in-game currency.
  + Visual effect: A glow or shimmer around the creature as its stats increase.
* **Breeding (MVP: "Essence Fusion"):**
  + **Fusion Chamber:** A structure in the Sanctuary.
  + Players select two creatures to fuse (a "Primary" and a "Secondary").
  + **Process:** Fusing consumes the "Secondary" creature. A portion of the "Secondary" creature's stats (e.g., 50% of its current Speed, Handling, Durability) is permanently added to the "Primary" creature's corresponding stats.
  + **Result:** The Primary creature becomes stronger. The Secondary creature is removed from the stable.
  + **Visual Impact:** The Primary creature might gain a subtle visual trait from the Secondary (e.g., a slight color tint, a minor pattern change).
  + **Cost:** Requires in-game currency and potentially a rare "Fusion Catalyst" item (obtained from harder races).

## **4. "Chilled" Elements & Design Philosophy (Sanctuary)**

While the racing is high-octane, the Sanctuary provides the "chilled" counterpoint:

* **No Fail States (Sanctuary):** Creatures cannot die or run away. They will not get sick or require constant attention. Growth and training are always positive.
* **Gentle Progression:** Creature training and hatching are time-based but can be optionally sped up. The emphasis is on steady, rewarding growth.
* **Soothing Aesthetics (Sanctuary):**
  + **Color Palette:** Soft, natural tones, lush greens, calming blues, and warm lighting.
  + **Animations:** Slow, subtle movements for creatures roaming, gentle swaying of plants.
  + **Ambient Soundscapes:** Birdsong, gentle wind, distant, melodic creature calls, and calming background music.
* **Intuitive UI:** Clean, uncluttered interface for creature management, easy to understand.
* **Optional Engagement:** Players can spend as much or as little time in the Sanctuary as they wish. Creatures will remain healthy and available for racing even if left unattended.

## **5. Art Style & Aesthetics**

* **Overall Style:** Stylized 3D with vibrant colors and clear visual readability. A blend of epic fantasy and accessible charm. Assets should be optimized for PC performance while maintaining visual quality.
* **Chariots:** Diverse designs incorporating fantasy materials (carved wood, gleaming metal, magically infused crystals, leather straps). Each with distinct silhouettes and details that hint at their performance type.
* **Creatures:** Whimsical yet powerful fantasy beasts. Designs should be distinct and allow for subtle visual changes as they are upgraded/fused. Key is that even "ground-bound" creatures look natural when performing their magical glide.
  + **Sky-Serpent:** Long, elegant, serpentine body. Feathered or crystalline wings. Glowing eyes.
  + **Gale-Hound:** Muscular, wolf/lion-like build. Wind-swept fur. Sharp claws. Agile appearance.
  + **Stone-Beast:** Stocky, heavily built. Rocky hide with glowing runic patterns. Powerful, thick limbs. Imposing and sturdy.
* **Tracks:** Visually distinct biomes with dynamic elements and clear visual cues for hazards and boost pads.
  + **"Cloudspire Ascent":** Towering, jagged cloud formations. Ancient, crumbling sky ruins embedded in the clouds. Waterfalls of magical energy. Distant, massive floating islands or sky-whales in the background. High altitude, ethereal feel.
  + **"Sunken Mire Speedway":** Dense, overgrown ancient forest. Giant glowing fungi. Gnarled, moss-covered trees forming natural tunnels. Misty pathways. Bioluminescent flora illuminating the track. Ground-level, humid, mysterious feel.
  + **"Crystal Canyon Dash":** A track carved through a canyon of massive, multi-colored, glowing crystals. Features narrow passages, reflective crystal surfaces, and energy beam hazards emanating from the crystals. Sharp, angular, vibrant feel.
* **UI:** Clean, intuitive, and thematic. Use fantasy-inspired fonts and iconography. Elements should scale well for various PC monitor resolutions.

## **6. Sound Design**

* **Music:**
  + **Racing:** Dynamic, high-energy orchestral fantasy music that adapts to race intensity (e.g., more intense during final lap, calmer during cruising).
  + **Sanctuary:** Calming, ambient, ethereal music with melodic themes.
  + **Menus:** Uplifting, adventurous fantasy themes.
* **Ambient Sounds:**
  + **Racing:** Wind rushing past, distant creature calls, sounds of magical energy, environmental sounds unique to each track (e.g., crackling crystals, dripping water in mire).
  + **Sanctuary:** Gentle creature chirps/growls, rustling leaves, soft magical hums, ambient wind.
* **Sound Effects (SFX):**
  + **Racing:** Satisfying boost activation sound, distinct collision sounds (light scrape vs. heavy impact), creature vocalizations during boosts/damage, distinct sounds for hitting hazards, UI clicks/feedback.
  + **Sanctuary:** Gentle sounds for petting, satisfying "ding" for stat upgrades, magical shimmer for fusion, egg cracking sound.

## **7. User Interface (UI)**

* **Main Menu:** Clear options for "Race," "Sanctuary," "Stable" (chariots), "Settings," "Quit."
* **Race Selection Screen:** World map displaying unlocked tracks and available races. Race details (rewards, recommended creature stats, difficulty) pop-up on selection.
* **Pre-Race Screen:** Displays selected chariot and creature. Options to swap, view stats, or apply temporary buffs (future). "Start Race" button.
* **In-Race HUD:**
  + Speedometer.
  + Arcane Energy bar (for boost).
  + Durability bar.
  + Lap counter / Race position.
  + Mini-map (optional for MVP, but highly desirable).
* **Post-Race Results:** Displays placement, time, rewards earned, and options to "Re-race," "Next Race," or "Return to Sanctuary."
* **Sanctuary UI:**
  + Top Bar: Currency display.
  + Bottom Bar: Buttons for "Hatching Nest," "Training Altar," "Fusion Chamber," "Return to Main Menu."
  + Creature Info Panel: Appears on clicking a creature, showing stats, affection, and interaction options.
* **Shop/Store (MVP for IAPs):** Simple UI for purchasing cosmetics or convenience items.

## **8. Monetization (MVP)**

The monetization strategy will be non-intrusive and focused on enhancing the player's experience without creating "pay-to-win" scenarios. Given the PC (Steam) platform, a base game purchase price is also a strong consideration.

* **Base Game Purchase:** The primary monetization model for a Steam release.
* **Cosmetic In-App Purchases (IAPs) / DLC:**
  + **Chariot Skins:** Unique paint jobs, material variations, or minor visual attachments (no performance impact).
  + **Creature Skins/Colorations:** Unlock rare color palettes or minor visual accessories for creatures.
  + **Sanctuary Decorations:** Items to customize the creature hub area.
  + **Pre-order Bonuses / Deluxe Editions:** Exclusive cosmetic items.
* **Time Savers/Convenience IAPs:** (Optional, if Free-to-Play model is considered, or as minor convenience for a paid game)
  + **Instant Hatching:** Speed up egg hatching timers.
  + **Training Boosts:** Temporarily increase the effectiveness of training.
  + **Resource Packs:** Bundles of in-game currency or "essence" for upgrades.
* **Rewarded Video Ads:** (Less common for paid PC games, but could be an option for F2P or very minor boosts)
  + **Optional Boosts:** Players can choose to watch a short video ad to:
    - Instantly hatch an egg.
    - Receive a small bundle of a random essence.
    - Temporarily double race currency earnings.
* **Ad Removal Purchase:** (Only if rewarded ads are implemented) A single, one-time IAP to permanently remove all rewarded video ad options from the game.
* **Future DLC / Expansions:** New tracks, chariots, creature types, or game modes can be sold as paid expansions post-launch.

## **9. Technical Considerations (Godot Engine 4, PC)**

* **Scene & Node System:** Utilize Godot's hierarchical scene and node structure extensively. Each chariot, creature, track segment, hazard, and UI element will be a reusable scene.
* **GDScript:** All game logic will be implemented using GDScript. Emphasis on clear, modular, and well-commented code, making it ideal for LLM assistance.
* **3D Models:** Low-to-mid poly models for all assets (chariots, creatures, track environments, props) to ensure good performance across a range of PC hardware. Textures will be key for visual detail.
* **Physics Engine:** Godot's built-in 3D physics engine (Jolt Physics) will be used for chariot movement, collisions, and interactions with track elements.
* **AI:** Waypoint-based AI for opponents, with simple state machines for varying behaviors (e.g., aggressive, defensive).
* **UI System:** Godot's Control nodes for all menus, HUD, and interactive elements. Designed for mouse and keyboard input, with gamepad support.
* **Particle Effects:** Extensive use of Godot's GPUParticles3D for boosts, damage effects, environmental effects (wind, mist, energy), and creature magical glides.
* **Shaders:** Custom shaders can be used for unique visual effects like glowing runes, energy fields, water reflections, or atmospheric haze to enhance the fantasy aesthetic.
* **Audio System:** Godot's AudioStreamPlayer nodes for music, ambient sounds, and SFX. Implement spatial audio for racing sounds.
* **Data Persistence:** Robust save/load system using Godot's FileAccess (e.g., JSON or binary data) to store player progress, unlocked items, creature stable, and currency.
* **Input Handling:** Support for keyboard, mouse, and common gamepads (Xbox, PlayStation). Customizable keybinds.
* **Performance Optimization:** Regular profiling and optimization of models, textures, shaders, and scripts to ensure smooth framerates on target PC specifications.
* **Steam Integration (Future):** Consider Steamworks API for achievements, leaderboards, and workshop support (post-MVP).

## **10. Future Scope (Beyond MVP)**

Once the MVP is stable, polished, and launched, potential additions could include:

* **More Tracks & Environments:** New biomes with unique hazards and visual themes.
* **Advanced Creature Breeding:** More complex genetic inheritance, rare mutations, distinct creature abilities that affect racing, creature "personalities."
* **New Creature Types:** Expand the roster of fantastical beasts.
* **Advanced Chariot Customization:** Deeper cosmetic options, performance-modifying parts (e.g., different wheel types, wing designs).
* **Race Modes:** Time trials, elimination races, challenge modes, boss races (against unique, powerful AI opponents).
* **Multiplayer:** Local split-screen or online multiplayer racing.
* **Story Mode:** A light narrative campaign involving a "Skyborne Gauntlet" championship.
* **Sanctuary Activities:** Mini-games within the Sanctuary, more complex creature interactions.
* **Player Progression System:** Skill trees for player abilities or passive bonuses.
* **Dynamic Weather:** Weather changes during races (e.g., sudden storms, fog banks).