

ENSE 805 - Project Presentation

Community Animal Safety Video Game

24 February 2025

Prepared by
Dev Joshi
Harsh Pandya



Introduction



Safe Paws is a 2D educational game designed to teach children (ages 6-10) safe interactions with pets using interactive storytelling and gamification. Players navigate real-world scenarios, make choices, and receive instant feedback to reinforce proper pet safety behaviors. The game aims to enhance engagement and retention, addressing the limitations of traditional teaching methods by making pet safety education fun, interactive, and easily understandable for young learners.



UN Sustainable Goals



Key Learnings from the Course Applied in Safe Paws

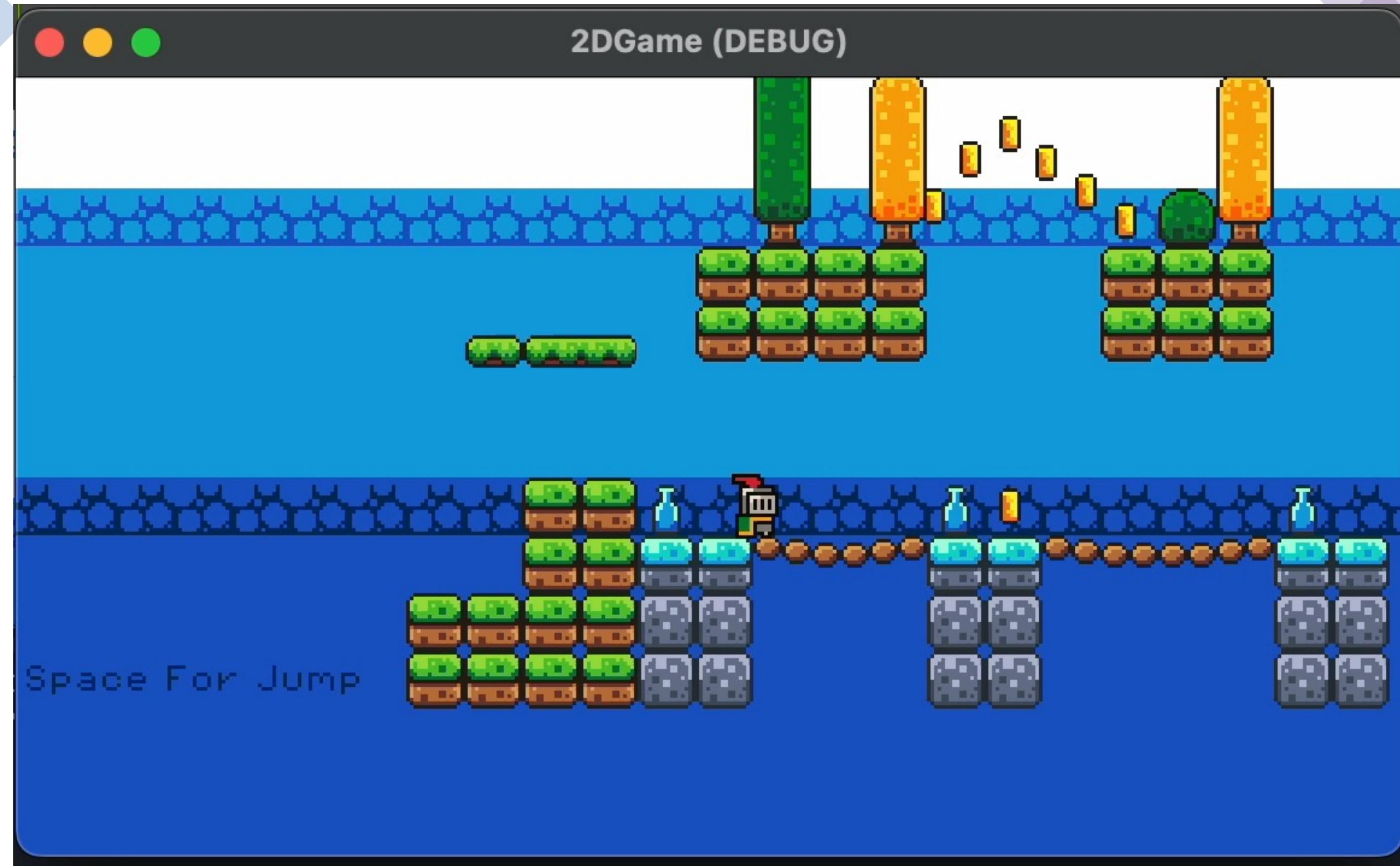
- We used the idea of digital learning spaces to create an interactive game where children can actively engage with pet safety lessons instead of just reading about them.
- Technology stewardship helped us choose the right tools, like Godot Engine, ensuring the game is easy to use, accessible, and works well across different devices.
- By applying gamification and knowledge management, we turned pet safety education into a fun, interactive experience where kids learn through real-world scenarios and instant feedback.
- Understanding how technology connects with communities guided us in designing a game that can be used in schools, pet adoption centers, and community programs to make learning more effective.



DEMO



https://github.com/Harsh-pandya/SafePaw-VideoGame/blob/main/Project%20Video%20Recordings/2D_Game_Build_Build_To_Learn_Godot.mov



https://github.com/Harsh-pandya/SafePaw-VideoGame/blob/main/Project%20Video%20Recordings/SafePaw_Game_With_Basic_Scenario.mov



Current Status of Project

Current Status: Early Development (Status: Yellow – On Track but Facing Challenges)

- The team is in the first stage of game development, focusing on storyline design and gameplay mechanics.
- The first scenario, "**Meeting a Dog**," has been developed, teaching children to ask permission before petting.
- Godot Engine is being used for development, with initial game assets integrated.

Key Challenges:

- Scene structuring and dialogue management within Godot needs improvement.
- Player interaction and event handling optimization to ensure a smooth experience.
- Balancing educational content with engaging gameplay mechanics.

Next Steps:

- Refining story integration, interaction system, and scene transitions.
- Developing a playable prototype for initial testing.
- Expanding game scenarios and refining feedback mechanisms.

Research Paper Progress

- The introduction of the research paper is divided into the following key parts:
 1. Motivation & Context:
 - Highlights the lack of engaging pet safety education for children in Saskatchewan.
 - Discusses local statistics (1,200 dog bite cases in 2019) and the need for a technological solution.
 - Emphasizes limitations of traditional teaching methods (brochures, lectures).
 2. Game Design & Educational Framework:
 - Showcases scenarios like "Meeting a Dog on a Leash" and "Encountering a Stray Animal".
 - Emphasizes real-time feedback and interactive decision-making for effective learning.
 - Developed using Godot Engine, ensuring 2D optimization, offline playability, and accessibility.
 3. Objectives & Long-Term Vision:
 - Focuses on reducing pet-related injuries while fostering empathy toward animals.
 - Highlights scalability beyond Saskatchewan, making Safe Paws a global educational tool.
 - Ensures Safe Paws remains free, accessible, and easy to use for children.

A. Motivation and Context

The teaching of secure pet interactions to Canadian children aged 6-10 remains a vital unaddressed requirement throughout Regina, SK, Canada because letter-based educational materials including booklets and spoken classroom instructions fail to maintain student interest in essential safety education that could otherwise protect them from animal-related injuries especially dog bites which are particular to local environments. This gap in effective education prompted the development of "Safe Paws," an innovative video game created in partnership with the Regina Humane Society, inspired by team leader Rebecca's vision to address a pressing regional challenge. Local statistics show that dog bites resulting in reports reached 1,200 cases handled by the Regina Humane Society in 2019 while a substantial number involved children demonstrating the extensive presence of such incidents within the community [1]. The Canadian Pediatric Society shows that 20% of Canadian children suffer dog bites before turning 18 years old and specifies the 5-9 age range as most vulnerable [2]. The need arises from these occurrences which endanger people and put strain on animal protection programs at the Humane Society because stopping these incidents requires a technologically advanced educational approach.

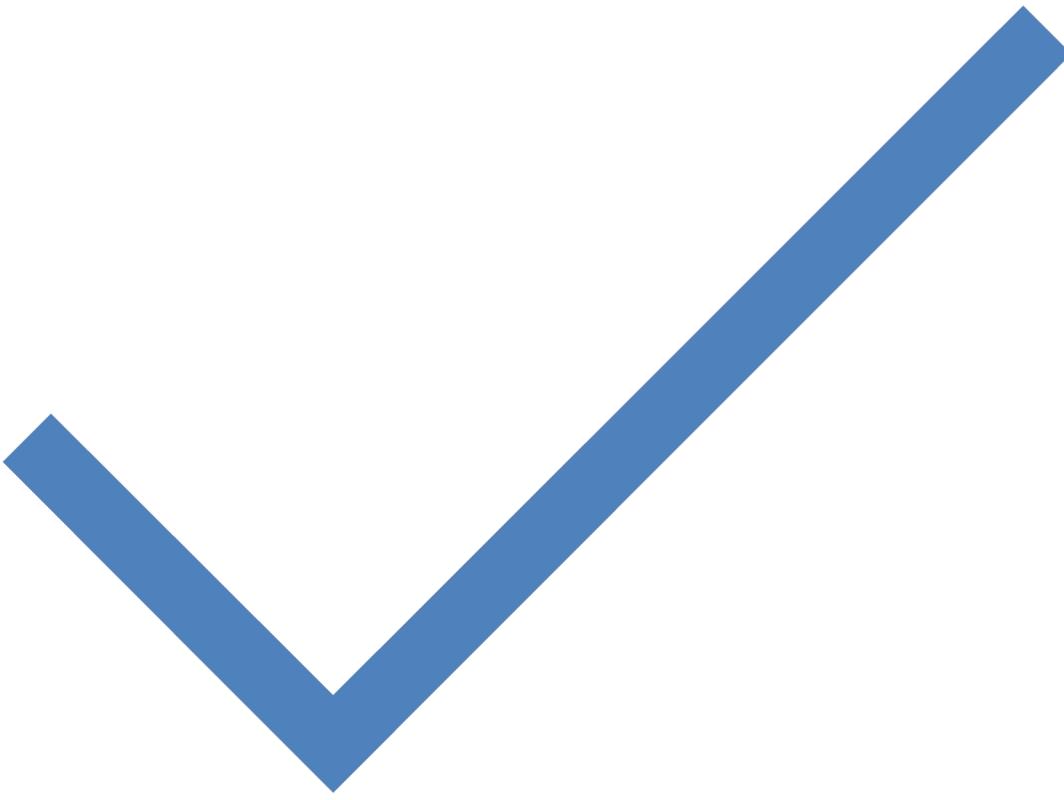
B. Game Design and educational frameworks

Children can experience "Meeting a Dog on a Leash" through "Safe Paws" animated atmosphere where they make decisions about petting with permission or fist sniffing or chin petting which provides immediate feedback to build practical dog safety understanding. The game presents further scenarios under "Visiting a Friend's House with a Pet" and "Encountering a Stray Animal" along with educational content that comes from animal behaviorists and local experts to provide accurate and region-specific pet behavior education for Saskatchewan children. The developers at the "Researching and Engineering

Community Centered Software" program at the University of Regina are developing this project as part of their academic curriculum that connects classroom education to community needs. The Godot game engine powers "Safe Paws" because it meets the development requirements with its lightweight open-source design and 2D optimization capabilities to deliver features such as multiple-choice interactions and real-time feedback and offline playability that make the application accessible on any device including those in rural Saskatchewan areas with poor internet connectivity which turns educational moments into interactive storytelling experiences.

C. Objectives

The core objective of "Safe Paws" focuses on bettering students' understanding of pet safety discovery while supplying them with competencies for minimizing accidents and simultaneously teaching empathy towards animals which matches the United Nations Sustainable Development Goals for Quality Education (SDG 4) through a diverse educational system combined with Life on Land (SDG 15) by encouraging respectful pet interaction [3]. The multidisciplinary team merging educators with game designers alongside representatives from the Regina Humane Society designed the project while implementing user testing processes to strike the correct balance between education and entertainment features specifically for their target audience. The educational potential of "Safe Paws" stretches beyond local needs since it demonstrates feasibility for pet safety education worldwide to decrease animal incidents across multiple countries through its model approach in educational gaming. This practical simulation functions to empower Saskatchewan children with essential knowledge and empathy which helps the Regina Humane Society achieve their mission to promote community safety and animal welfare at both local and extended provincial levels.



Thank You