SafePaws

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***Abstract*—This electronic document is a "live" template and already defines the components of your paper [title, text, heads, etc.] in its style sheet. **CRITICAL: Do Not Use Symbols, Special Characters, Footnotes, or Math in Paper Title or Abstract.* (*Abstract*)**

Keywords— Educational Video Game, Pet Safety, Gamification, Godot Engine, Child Safety Education, Interactive Learning

I. INTRODUCTION

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.

II. Ease of Use

A. Selecting a Template (Heading 2)

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- Use either SI (MKS) or CGS as primary units. (SI units are encouraged.) English units may be used as secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as "3.5-inch disk drive".
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The equations are an exception to the prescribed specifications of this template. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font). To create multileveled equations, it may be necessary to treat the equation as a graphic and insert it into the text after your paper is styled.

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$$a + b = \gamma \tag{1}$$

Note that the equation is centered using a center tab stop. Be sure that the symbols in your equation have been defined before or immediately following the equation. Use "(1)", not "Eq. (1)" or "equation (1)", except at the beginning of a sentence: "Equation (1) is . . ."

D. Some Common Mistakes

- The word "data" is plural, not singular.
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- Be aware of the different meanings of the homophones "affect" and "effect", "complement" and "compliment", "discreet" and "discrete", "principal" and "principle".
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- There is no period after the "et" in the Latin abbreviation "et al.".
- The abbreviation "i.e." means "that is", and the abbreviation "e.g." means "for example".

An excellent style manual for science writers is [7].

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a) Positioning Figures and Tables: Place figures and tables at the top and bottom of columns. Avoid placing them in the middle of columns. Large figures and tables may span across both columns. Figure captions should be below the figures; table heads should appear above the tables. Insert figures and tables after they are cited in the text. Use the abbreviation "Fig. 1", even at the beginning of a sentence.

TABLE I. TABLE TYPE STYLES

Table Head	Table Column Head		
	Table column subhead	***Subhead***	***Subhead***
copy	More table copy[a]		

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[a.] Sample of a Table footnote. (*Table footnote*)

Fig. 1. Example of a figure caption. (*figure caption*)

Figure Labels: Use 8 point Times New Roman for Figure labels. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity "Magnetization", or "Magnetization, M", not just "M". If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write "Magnetization (A/m)" or "Magnetization {A[m(1)]}", not just "A/m". Do not label axes with a ratio of quantities and units. For example, write "Temperature (K)", not "Temperature/K".

Acknowledgment *(Heading 5)*

The preferred spelling of the word "acknowledgment" in America is without an "e" after the "g". Avoid the stilted expression "one of us (R. B. G.) thanks ...". Instead, try "R. B. G. thanks...". Put sponsor acknowledgments in the unnumbered footnote on the first page.

References

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For papers published in translation journals, please give the English citation first, followed by the original foreign-language citation [6].

[1] G. Eason, B. Noble, and I. N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," Phil. Trans. Roy. Soc. London, vol. A247, pp. 529–551, April 1955. *(references)*

[2] J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.

[3] I. S. Jacobs and C. P. Bean, "Fine particles, thin films and exchange anisotropy," in Magnetism, vol. III, G. T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271–350.

[4] K. Elissa, "Title of paper if known," unpublished.

[5] R. Nicole, "Title of paper with only first word capitalized," J. Name Stand. Abbrev., in press.

[6] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interface," IEEE Transl. J. Magn. Japan, vol. 2, pp. 740–741, August 1987 [Digests 9th Annual Conf. Magnetics Japan, p. 301, 1982].

[7] M. Young, The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989.

[8] K. Eves and J. Valasek, "Adaptive control for singularly perturbed systems examples," Code Ocean, Aug. 2023. [Online]. Available: https://codeocean.com/capsule/4989235/tree

[9] D. P. Kingma and M. Welling, "Auto-encoding variational Bayes," 2013, arXiv:1312.6114. [Online]. Available: https://arxiv.org/abs/1312.6114

[10] S. Liu, "Wi-Fi Energy Detection Testbed (12MTC)," 2023, gitHub repository. [Online]. Available: https://github.com/liustone99/Wi-Fi-Energy-Detection-Testbed-12MTC

[11] "Treatment episode data set: discharges (TEDS-D): concatenated, 2006 to 2009." U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, August, 2013, DOI:10.3886/ICPSR30122.v2

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