

Video Joystick

Supporting Information

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1 Introduction

The Supporting Information for this paper contains a small, but sufficient, frame analysis extracted from the raw captures in 60 frames per second. Players 2 and 3 recordings don't need to be further analyzed in this paper, since the results were equivalent to Player 1's. It's also worth mentioning that StarMines footage isn't exposed in this Supporting Information because the ship's movement isn't as sharp as Tux's, therefore harder to see the effects of the button presses.

Here, we also document other resources online related to the project, such as the source code and the complete video of 3 different people playing through the games using Video Joystick. We encourage anyone that is interested in this project to check these materials out, to have a better understanding about the inner workings and general user experience of the proposed controller.

2 Player 1 - SuperTux Jump 1



Figure 1: Frame 1 - Before button press



Figure 2: Frame 2 - One frame before button press



Figure 3: Frame 3 - Button pressed

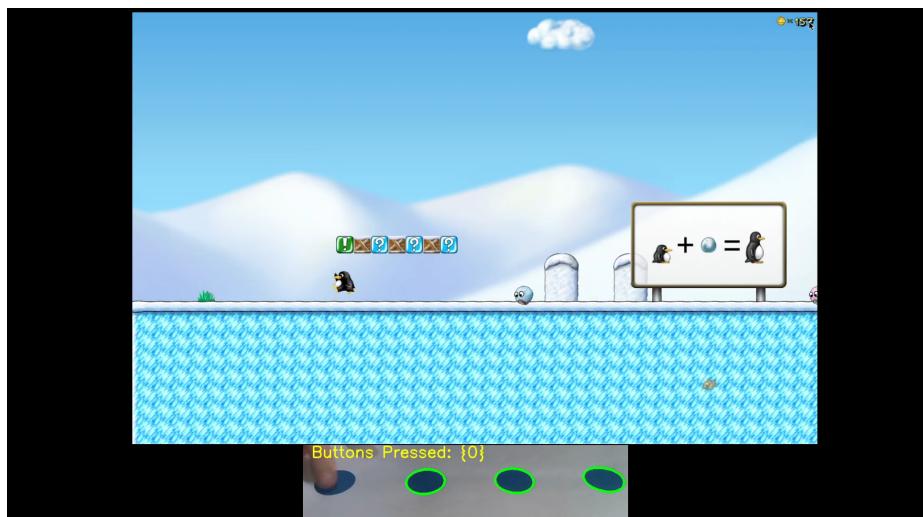


Figure 4: Frame 4 - Tux jumped

3 Player 1 - SuperTux Jump 2



Figure 5: Frame 1 - Before button press



Figure 6: Frame 2 - One frame before button press



Figure 7: Frame 3 - Button pressed and Tux jumped



Figure 8: Frame 4 - One frame after Tux jumped

4 Player 1 - SuperTux Jump 3



Figure 9: Frame 1 - Before button press



Figure 10: Frame 2 - One frame before button press



Figure 11: Frame 3 - Button pressed



Figure 12: Frame 4 - Tux jumped

5 Player 1 - SuperTux Jump 4

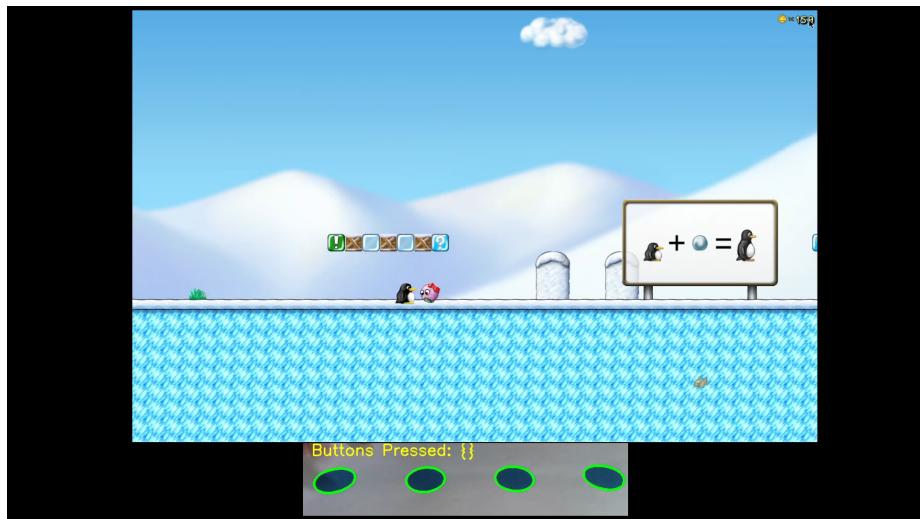


Figure 13: Frame 1 - Before button press



Figure 14: Frame 2 - One frame before button press



Figure 15: Frame 3 - Button pressed and Tux jumped



Figure 16: Frame 4 - One frame after Tux jumped

6 Player 1 - Failed button press

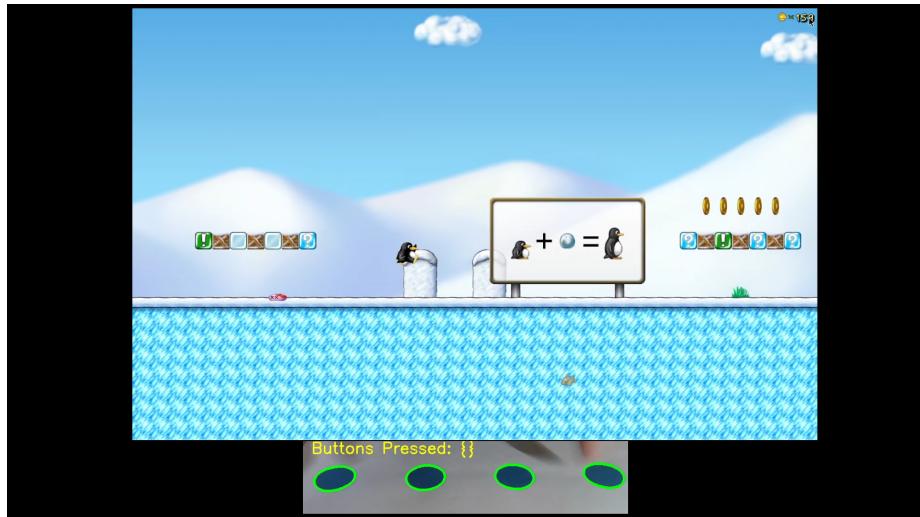


Figure 17: Frame 1 - Two frames before button press

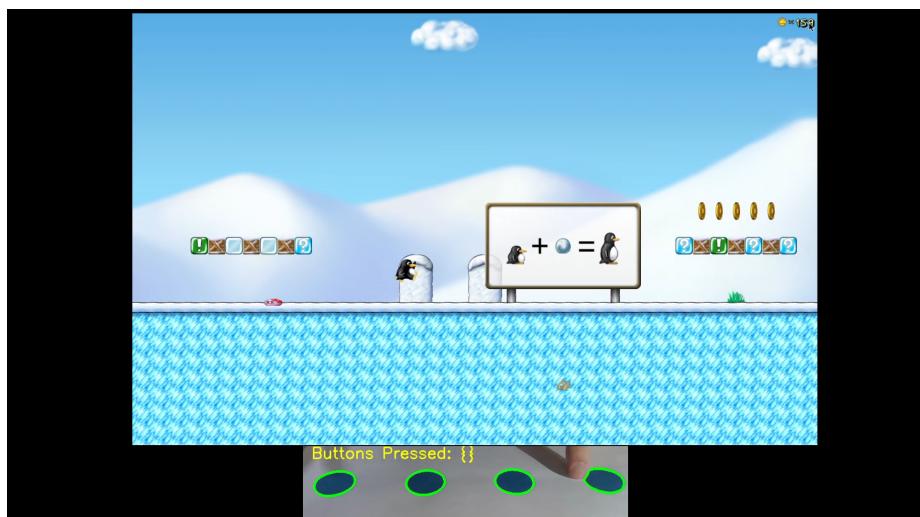


Figure 18: Frame 2 - One frame before button press



Figure 19: Frame 3 - Button pressed and failed to be recognized



Figure 20: Frame 4 - One frame after the button has been pressed



Figure 21: Frame 5 - Two frame after the button has been pressed



Figure 22: Frame 6 - Three frame after the button has been pressed

7 Source Code and full-length videos

The complete source code for the project can be found here:

<https://github.com/fvc Calderan/VideoJoystick>

And the full-length video of 3 different people playing through the games using Video Joystick can be found in this link:

<https://youtu.be/FDVQ30AovbA>