

## Xbox One Controller Input Study

*Hi! Thanks for agreeing to be a participant in a study for my Human-Computer Interaction course, MSCI630. Please follow the numbered steps found below to complete the study. I suspect each participant will take between 30 minutes and 1 hour (including setup and exit survey).*

*The purpose of this study is to identify input pattern differences between individuals when using gamepad controllers. For the sake of consistency, the Xbox One controller is the only one being considered for this study. No identifying or system information is collected by the executables used in this study. No internet connection is required, the executables do not communicate with the network at all. Data collected will focus on button press order and duration and will be stored in CSV files that you are asked to upload at the end of the study (you could verify this if you wish, but please don't edit the files).*

1. Download the full Controller Input Study folder from Google Drive to a Windows 10 PC.
2. Complete the Consent Form. Digital signatures should be acceptable. If you can print and sign the form but don't have a scanner then photographs of the pages are acceptable.
3. Get your Xbox One controller and connect it to a Windows 10 PC using a micro-USB cable. You do not require batteries to use the Xbox One controller when connected via USB. Please use this connection method rather than pairing it to your Windows 10 PC via Bluetooth (if your controller is the newer variant that supports this option).
4. Run ControllerPrimer.exe. (Windows might complain as it's not a recognized program click More Info -> Run Anyway). This will show you the types of instructions you will see and get you familiar with how the study will run (it's a very short version of the study). Be sure to familiarize yourself with the labels being used for the various buttons available on the Xbox One controller. The two likely requiring some explanation are 'LSB' and 'RSB', these refer to 'Left Stick Button' and 'Right Stick Button' (push the thumbstick down to activate the button). The Primer will have you press every button being used in the study at least once - there will not be any surprises.
  - a. Primer instructions: you may complete the primer as many times as you like, use it to become familiar with the labels or identify a connection issue with the Xbox One controller.
  - b. At each new button sequence take a moment to relax your grip on the controller and make sure you're aware of each button in the sequence. Try to avoid tailoring your grip to the sequence, instead grip the controller naturally as you would when typically gaming.
  - c. To the best of your ability please enter the requested buttons in one fluid attempt, you may need to repeat a button press if you miss the required button.

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Take a moment during the primer to intentionally skip a button to observe the program's response.

- d. Please pause for 1 or 2 seconds between each repeated trial of the same sequence. (Take a breath, relax your grip).
  - e. If you require a break: take it once you've completed all repetitive trials of the sequence (the trial count is displayed at the top of the display).
5. Run the ControllerStudy.exe program. (Windows might complain as it's not a recognized program click More Info -> Run Anyway). Please carefully read the instructions below.
- a. Study instructions: Press the buttons in the sequence displayed. Emphasize accuracy rather than speed. Avoid 'button mashing' - incorrect button presses will be logged.
  - b. At each new button sequence take a moment to relax your grip on the controller and make sure you're aware of each button in the sequence. Try to avoid tailoring your grip to the sequence, instead grip the controller naturally as you would when typically gaming.
  - c. Once you've started a trial of a sequence enter the requested buttons in one fluid attempt, you may need to repeat a button press if you miss the required button. Emphasize accuracy rather than speed.
  - d. Please pause for 1 or 2 seconds between each repeated trial of the same sequence. (Take a breath, relax your grip).
  - e. If you require a break: take it once you've completed all repetitive trials of the sequence (the trial count is displayed at the top of the display).
6. Open the Exit Survey Link to complete the questionnaire and upload the necessary files. There will be 10 csv files generated by the ControllerStudy program, these should be in the same folder as the executable you ran to begin the study.
7. You're done! A big thank you for helping me!