



Bot Security for Qualtrics and Gorilla

There have been several reports of bot attacks targeting online research. Specifically, these bot attacks target online research that:

1. uses non-personal (anonymous) links to surveys or online tasks
2. is promoted via social media platforms (i.e. Facebook)
3. pays participants using digital vouchers

The aim of these bot attacks is to claim financial compensation for participation. When successful these bot attacks can quickly accrue financial losses. In addition, both successful and failed attacks can impact data quality by adding bot responses to datasets. In this manual, we outline several steps that can be taken to prevent bot attacks from succeeding and/or detect bot input in your datasets when collection data using the Qualtrics and Gorilla platforms. If you have any questions after reading this manual you can contact us at labs.fsw@uu.nl.

Qualtrics

To prevent bots from filling out your survey in Qualtrics, build your survey in the attached *Bot_security_template.qsf* template,

Security settings

If you already have a survey in Qualtrics, you can change these settings to enable bot security:

1. Include a *reCAPTCHA* in your survey as explained on [this page](#). Every respondent will then have to fill in a *reCAPTCHA*, after which Qualtrics calculates the likelihood that this respondent is a bot. This score will be included in your dataset, enabling you to exclude bots from analysis based on the *reCAPTCHA* score.
2. Turn on *security scan monitor*, as explained [here](#). This monitor will prevent security scanners from accidentally starting a survey. This can happen when survey links are being sent to participants via e-mail.
3. Turn on *prevent multiple submissions*, as explained [here](#). This will prevent both humans and bots from taking your survey multiple times.

Tasks for humans

One method to prevent bots from filling in questionnaires is by adding questions that are easy for human to answer but difficult for bots. As an example, we have added an Animal naming Task to the template. This animal naming task will require respondents to name animal silhouettes, which should be easy for humans but difficult for bots. Failure to answer a naming task correctly will block the participant from continuing the survey. It is also possible to allow participants to continue the survey and merely log their answers





so that you may exclude possible bots during data analysis. If you wish to do so, [turn Add Validation off](#) for each of the “Answer:” questions.

Hidden questions

In addition, this template contains a hidden question that only bots may be able to see and thus answer. If respondents have answered this question, they can be classified as bots and the associated data can be removed from the dataset.








Gorilla

To prevent bots from completing online experiments made in Gorilla, Gorilla has created tasks that are easy for humans, but difficult for bots. We recommend adding the 'Naming task' to your study, which will ask participants to name (easy) silhouettes of animals. Gorilla will then add the number of correct answers of each participant to your dataset, enabling you to filter out bots from analysis.

NB: If you are working with visually impaired participants or if your study is otherwise unsuitable for this task, you can pick another task from the [anti-bot tasks provided by Gorilla](#). For this, still follow the steps below, but find your chosen task in step 6 and 7.

1. Go to [Gorilla](#) and log in
2. Go to your project
3. Click *Create*
4. Click *Task builder task*
5. Click *Clone Existing*
6. From 'Show results in', select *Classic Tasks: Language*
7. Click *Naming Task*
8. Click *OK*
9. Include the task in your Experiment

Alternatively, you can use the outcome of this task to prevent participants (bots) from entering your main experiment:

1. Go to your Experiment
2. Click the *Task*  icon in the menu bar
3. Select the just created Naming Task and click *OK*
4. Connect the start of your experiment (a start node, informed consent, etc.) to the top of the Naming Task
5. Click the *Branch*  icon in the menu bar
6. As *Group*, type **Bots**
7. As *Property*, type **correct**
8. For *Rule*, select *is_less_than*
9. As *Value*, type **4**
10. Click the *plus*  sign at the bottom of the window
11. As *Group*, type **Participants**
12. As *Property*, type **correct**
13. For *Rule*, select *is_greater_than_or_equal_to*





14. As *Value*, type **4**
15. Tick the *Default* box
16. Click *Save*
17. Connect the top of the Branch node to the bottom of the Naming Task
18. Connect the left bottom of the Branch node (the 'bots' branch) to the Finish node
19. Connect the right bottom of the Branch node (the 'participants' branch) to the main part of your experiment
20. Your experiment might now look like this:

