Online Experiments Online Tools

Uri Hertz, PhD

Department of Cognitive Sciences

School of Psychological Science, University of Haifa

uhertz@cog.Haifa.ac.il

www.socialdecisionlab.net





JavaScript

JavaScript is a programming language which is extremely popular for building web applications.

There are numerous libraries, packages, and web resources for a variety of uses, many are open source and free to use and fork.

In this section I will introduce some of tools that are relevant for people building experiments.

I will present no-programming user interface tools to build experiments and surveys.

Tools for data collection

```
Surveys:
SurveyJS <a href="https://surveyjs.io/">https://surveyjs.io/</a>
Card-deck experiments:
JSPsych <a href="https://www.jspsych.org/">https://www.jspsych.org/</a>
Gorilla.sc https://gorilla.sc/
Lab.js <a href="https://lab.js.org/">https://lab.js.org/</a>
Game engine:
Phaser <a href="https://phaser.io/">https://phaser.io/</a>
Multiplayer experiments (Node.js):
http://nodegame.org/
https://lioness-lab.org/
```

No-programming tools

A number of websites allow one to build and deploy online experiments without any background in programming.

They have a user interface where one can build surveys/experiments, some are very sophisticated.

You can use these tools and then download the code they create to deploy on your own.

However,

It is not always easy to learn these tools either (but you can start with an example and adapt it).

You may need to add your own scripts if you want to add some functionality.

SurveyJS

- https://surveyjs.io/create-survey
- A versatile tool to build surveys, deploy them, and analyse the results.
- You can build a short, one page questionnaire, or a long multipage survey.
- You can download the code and run it on your own website, or use their facilities.

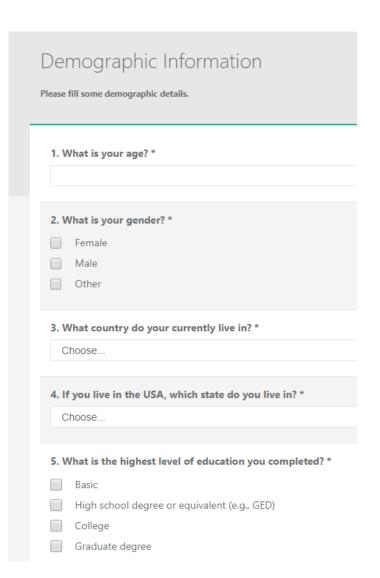
Survey JS

I usually use this tool to build short questionnaires, and embed these in my experiment.

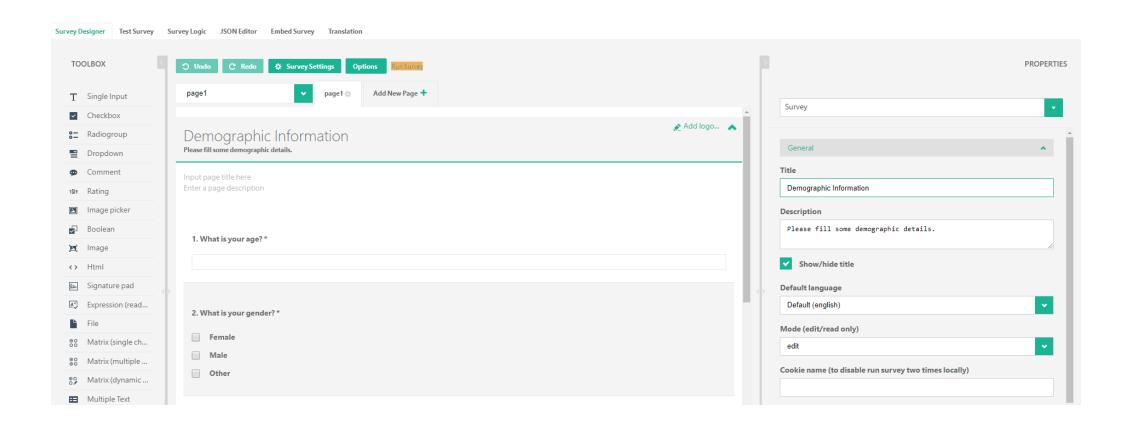
For example – demographics page.

https://surveyjs.io/published?id=da352f34-562f-4d9f-b7d4-c1b6792e7b6c

https://surveyjs.io/Service/EditSurvey/da352f3 4-562f-4d9f-b7d4-c1b6792e7b6c



Graphic user interface



And export to your own site

Export the json and embed in your website/experiment.

```
Survey Designer Test Survey Survey Logic JSON Editor Embed Survey
                                                                         Translation
          title: "Demographic Information",
          description: "Please fill some demographic details.",
            name: "page1",
            elements: [
              type: "text",
     10
              name: "question1",
              title: "What is your age? ",
     12
              isRequired: true,
     13
              validators: [
     14
     15
               type: "numeric",
     16
                minValue: 18,
     17
                maxValue: 99
     18
     19
     20
     21
     22
              type: "checkbox",
     23
              name: "question2",
              title: "What is your gender?",
     25
              isRequired: true,
     26
              choices: [
     27
     28
               value: "item1"
     29
                text: "Female
     30
     31
     32
               value: "item2",
     33
               text: "Male"
     35
     36
               value: "item3",
     37
               text: "Other '
     38
     39
     40
```

Lab.js/ Gorilla.sc

These are tools designed for building psychology (card-deck) experiments.

Lab.js is leaner – less options and less complications.

Gorilla.sc is more comprehensive and allows the user to build complicated experiments.

They both have tutorials and examples, and allow you to build tasks without any scripting.

https://gorilla.sc/admin/task/75590/editor?

https://labjs.felixhenninger.com/

Lab.js/ Gorilla.sc

There is a learning curve – you need to get to know the logic of the platform, and follow some tutorials and examples.

Both allow export to combine with other platforms, and deployment of the experiment in different hosts.

Both could save a lot of time if you don't want to learn JS, and have a classic experimental design which can be easily adapted from their examples.