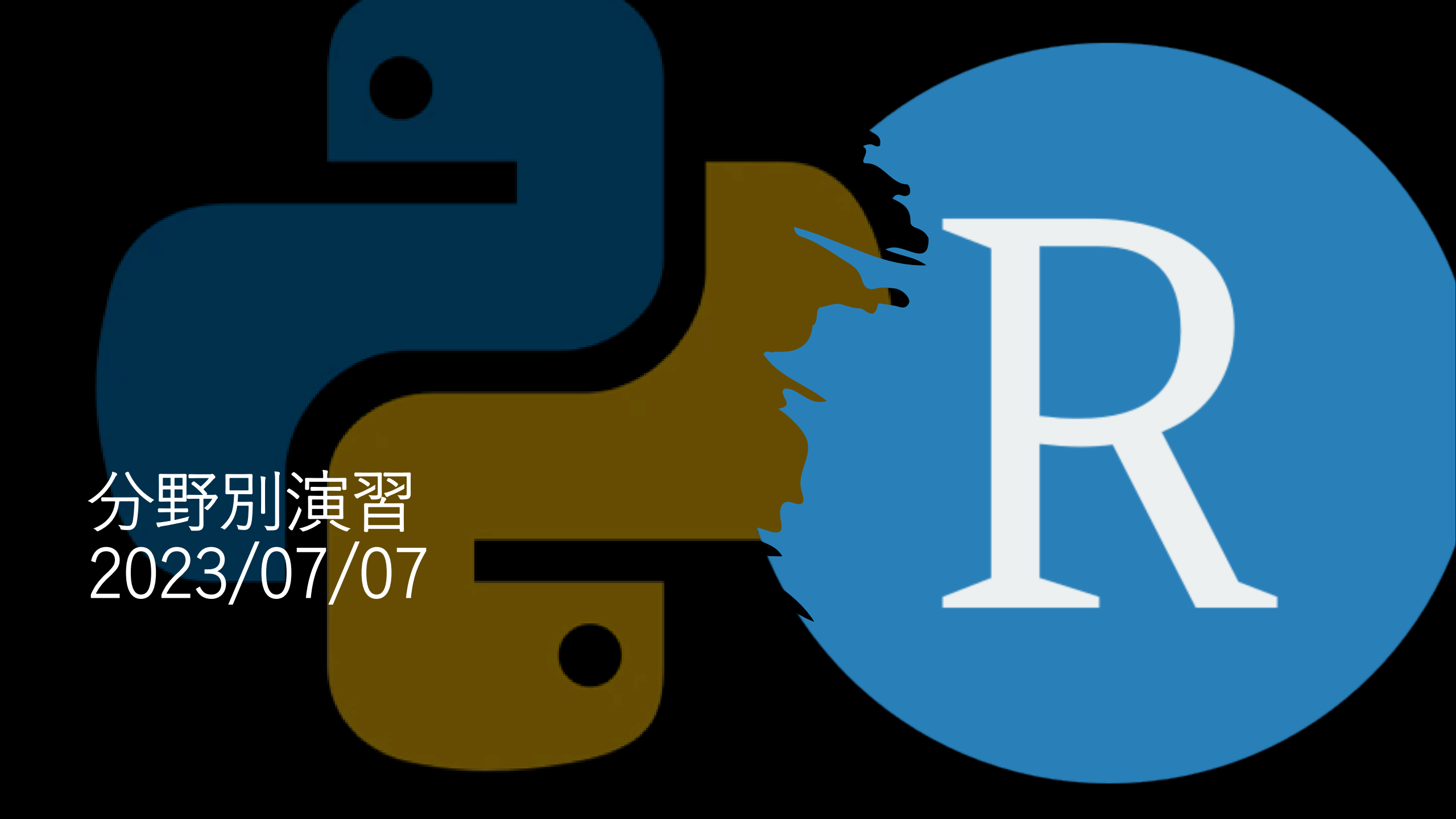
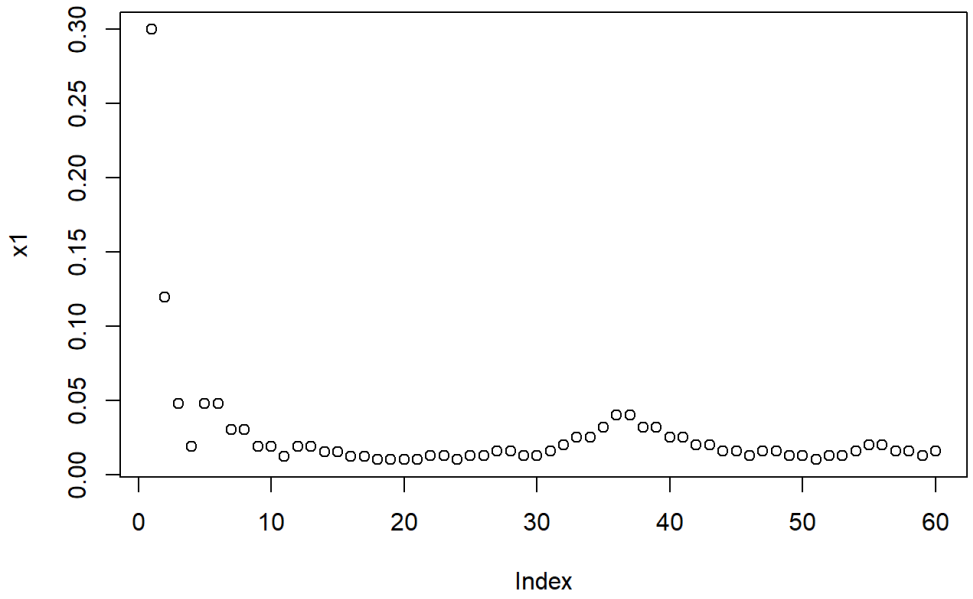


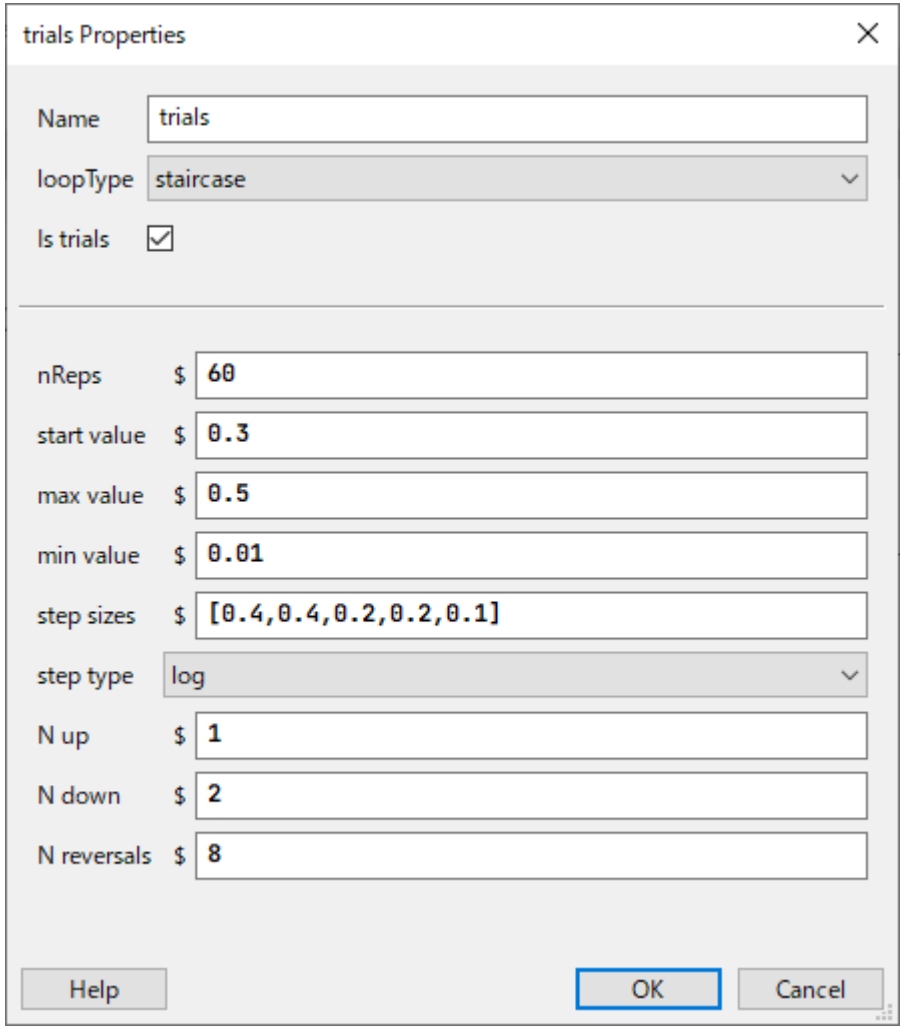
分野別演習
2023/07/07

peripheral_staircase.psyexp

Orientation discrimination in peripheral vision

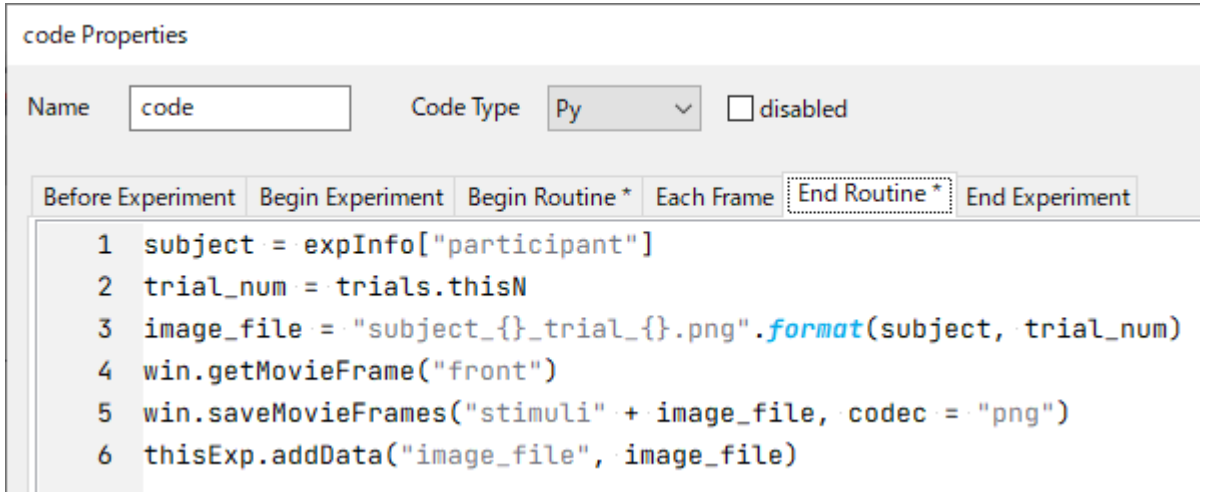
- Staircasing on stimulus contrast for estimating threshold
- 1-up 2-down staircase converges to 71% accuracy
- P(correct)^2 = P(incorrect) = 0.5, P(correct) = 0.71
- Threshold can be estimated with small numbers of trials





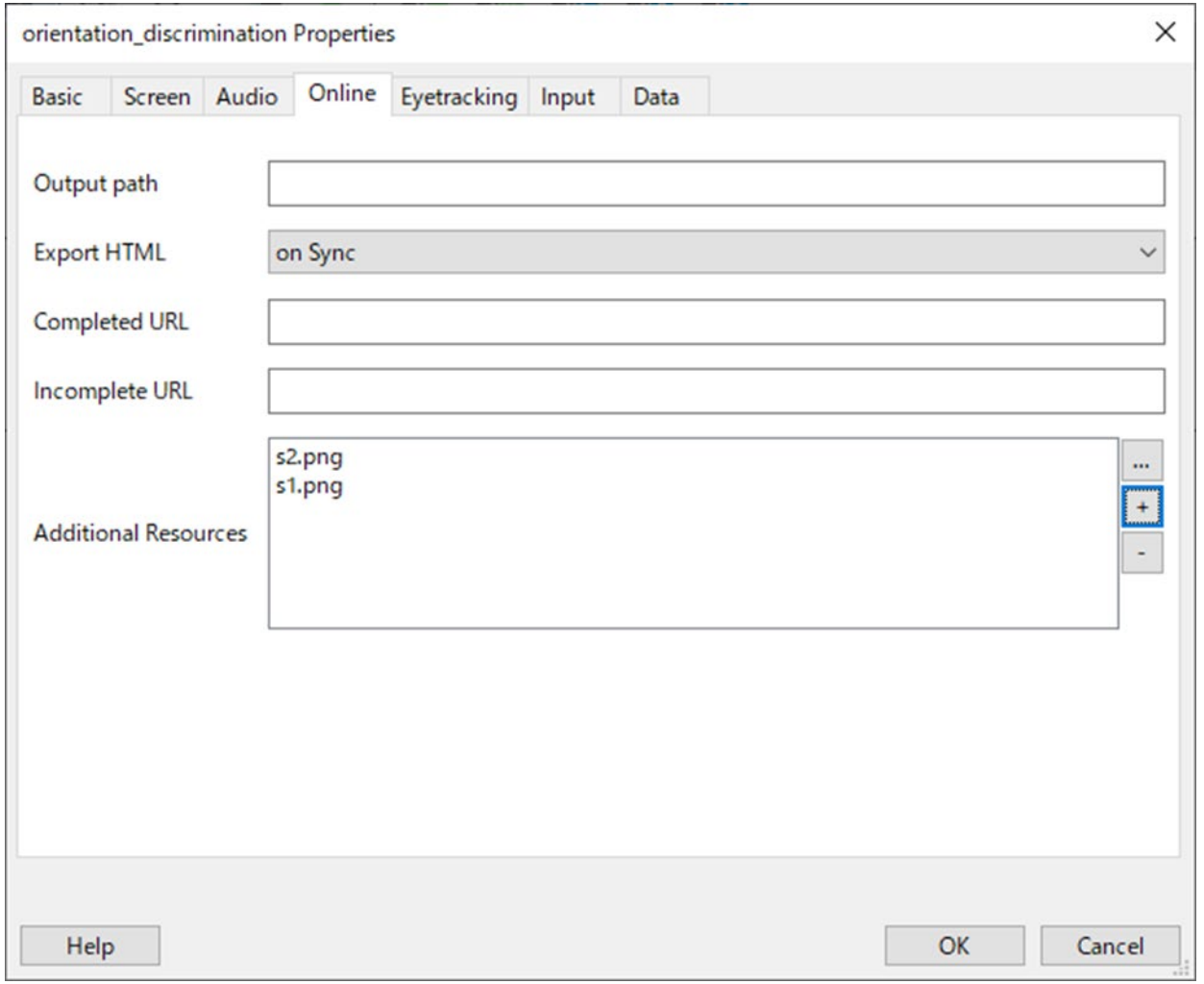
stimulus_generator.psyexp

- This experiment saves the screen in each trial as png
- Set grating contrast at the threshold value estimated by staircasing
- Save upward and downward images as “s1.png” and “s2.png”
- These images will be used in online experiment (since PsychoPy does not offer grating component for online use)



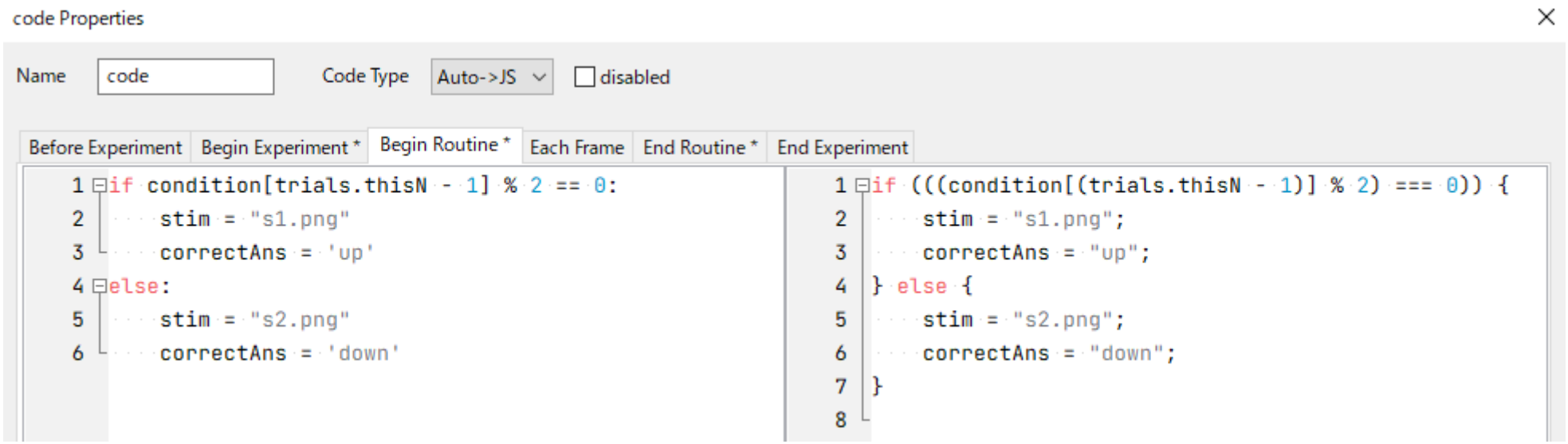
Preparation for online experiment (v2022.1.4)

- Open peripheral_discrimination.psyexp
- Click Setting > Online
- Make Output path empty
- Specify Additional Resources (image files, csv for experimental parameters, etc.)



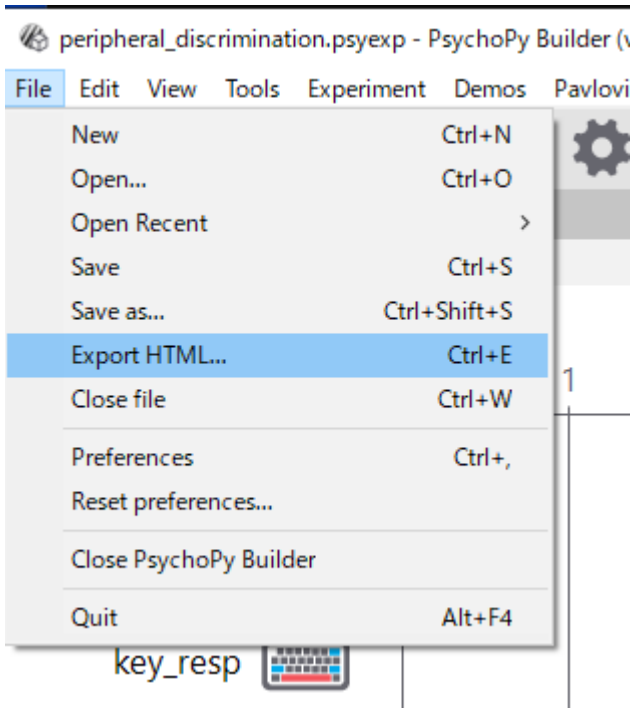
Preparation for online experiment (v2022.1.4)

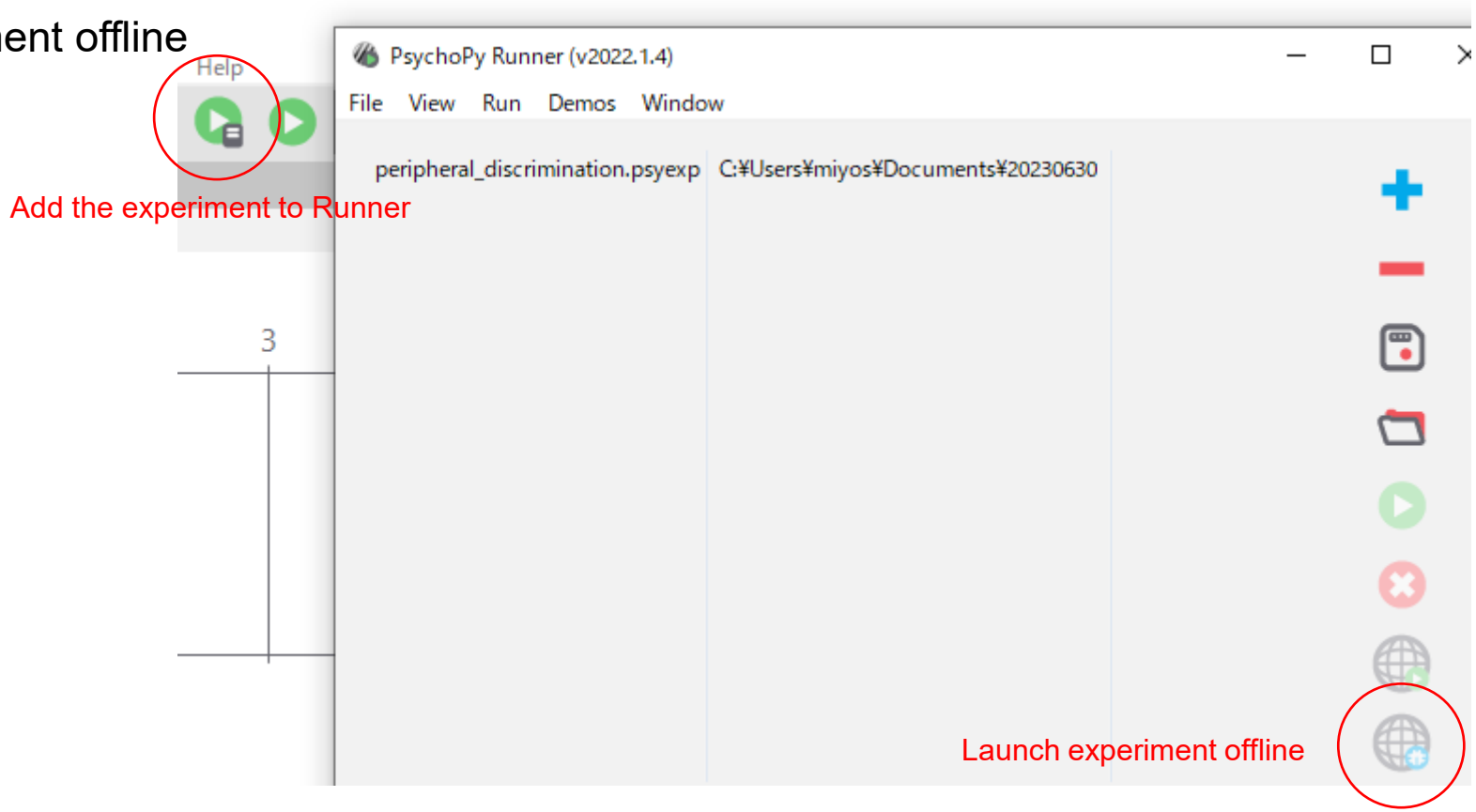
- Open Code components
- Change Code Type to Auto->JS
- Check if everything is translated correctly



Preparation for online experiment (v2022.1.4)

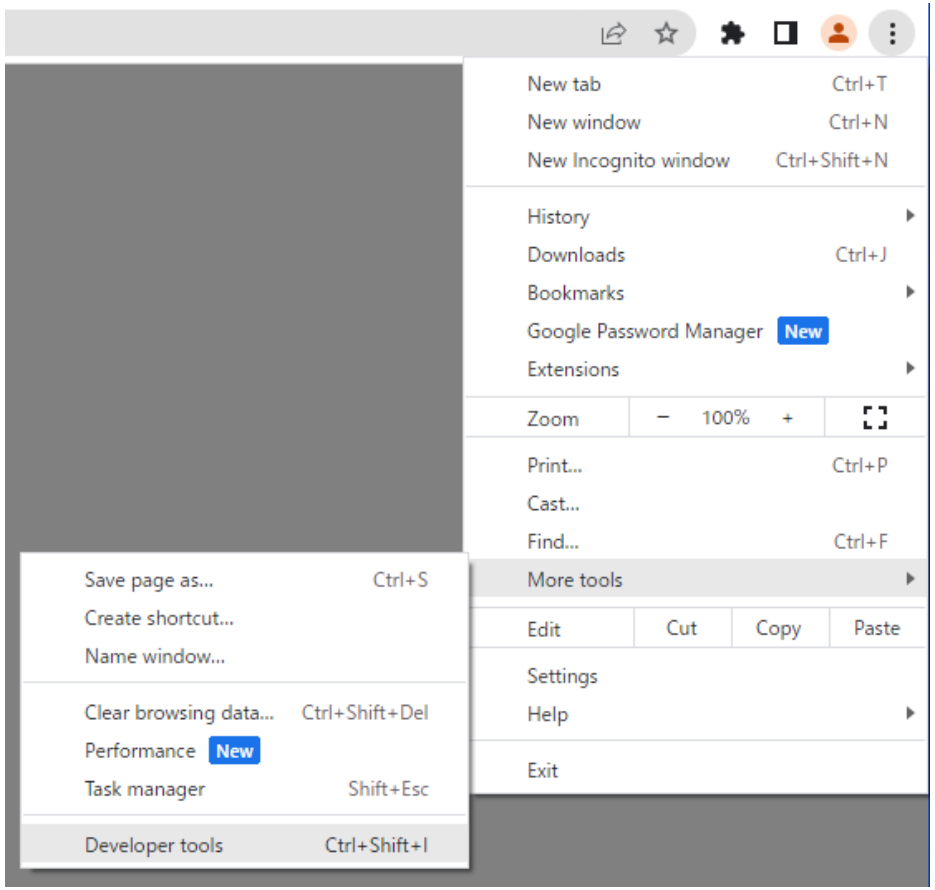
- Click File > Export HTML
- The experiment will be translated into html & JavaScript
- Save created js file as it is
- Then launch translated experiment offline

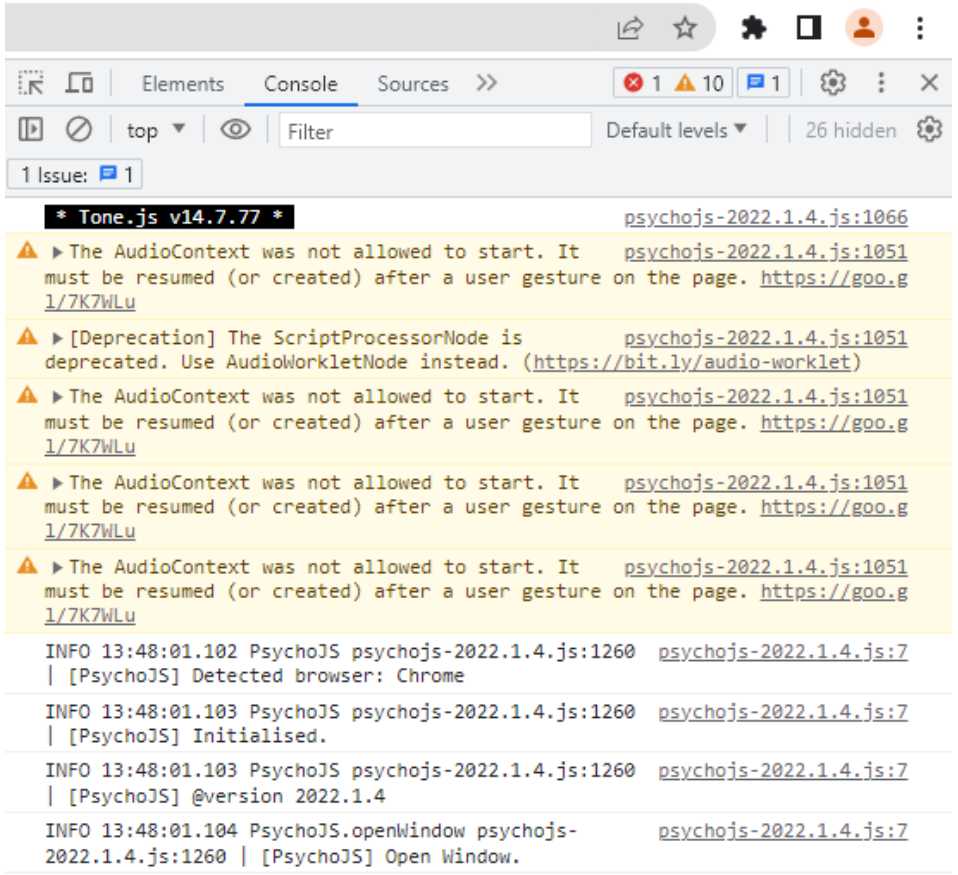




Local debugging

- You can use Developer tools on Google Chrome for troubleshooting





Local debugging

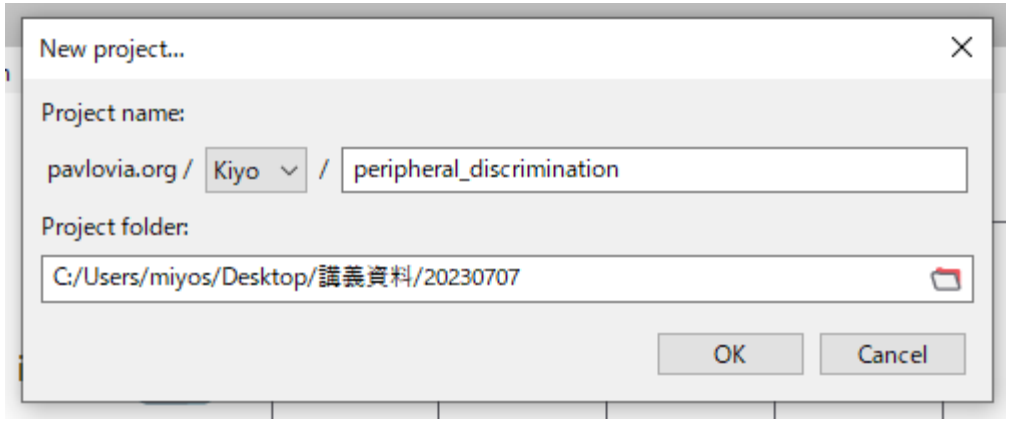
- Some functions cannot be translated into html/JavaScript (e.g., several functions of numpy)
- You need to directly modify your JavaScript for those occasions (check followings)

Official documents
https://www.psychopy.org/online/
https://workshops.psychopy.org/3hrs/online.html

PsychoPy version 2020.1.3-2020.2.10, Python to JavaScript Crib Sheet
https://docs.google.com/document/d/183xmwDgSbnJZHMGf3yWpieV9Bx8y7fOCm3QKkMOOXFQ/edit#heading=h.fbo8f8y1ynwk

Register experiment to Pavlovia

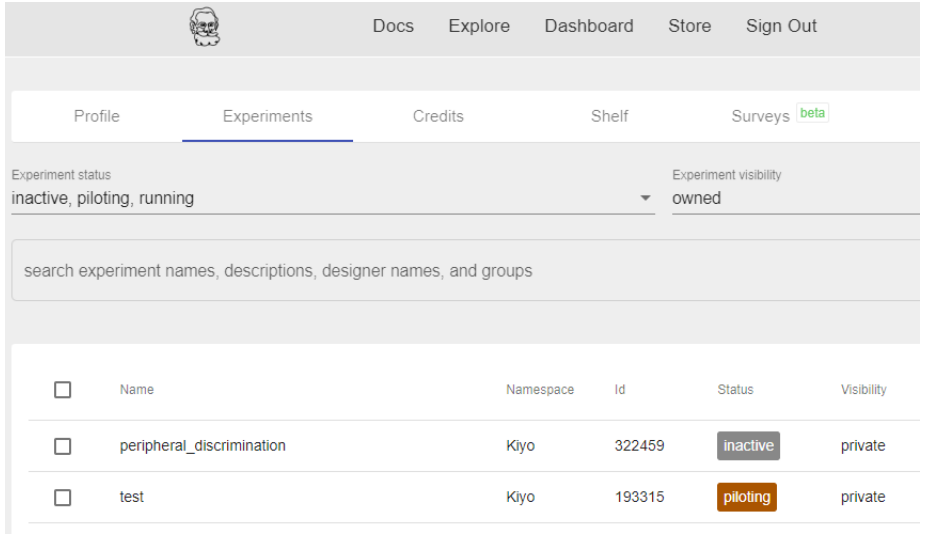
- Pavlovia: official experiment server for PsychoPy
- Register your email on Pavlovia
- On PsychoPy Builder, click Pavlovia.org > User > Log in to Pavlovia
- Then, click Pavlovia.org > Sync > Create a project
- Name the project and specify the folder location that includes your materials

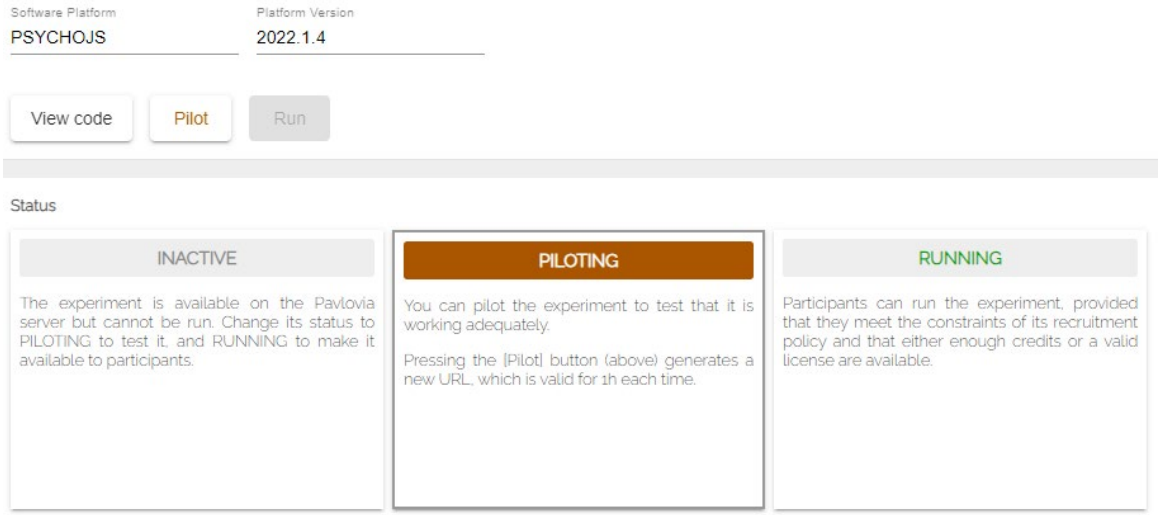


Many interesting demos: https://pavlovia.org/explore?sort=DEFAULT&search=demos

Launch your experiment on Pavlovia

- Open Dashboard on Pavlovia, where you can find your project
- Change the status into PILOTING, and click Pilot
- Your experiment will be launched online with a temporal URL valid for an hour
- In this way of use, data csv will only be stored into participants' local computer
- You need to purchase Credit to conduct large-scale online experiments
- You can also distribute your experiment on crowd-sourcing platforms (Prolific, MTurk, Yahoo, etc.)





Homework

- Design your own experiment on PsychoPy and launch it on Pavlovia
- Send an experiment URL to the other students and collect data from at least 2 participants
- Conduct statistical analyses on your data and interpret the resulting patterns
- Summarize your findings into a few-page document, which should be submitted to PandA with related materials (e.g., py/html/JavaScript codes)