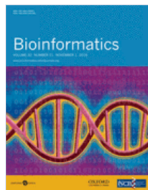


BUNS

Barnes maze UNbiased Strategy classification



BUNS is an automated method for machine-learning classification of Barnes maze searching strategies, compatible for AnyMaze and EthoVision users.



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JOURNAL ARTICLE

Unbiased classification of spatial strategies in the Barnes maze FREE

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[Unbiased classification of spatial strategies in the Barnes maze.](#) Tomer Illouz, Ravit Madar, Charlotte Clague, Kathleen J Griffioen, Yoram Louzoun and Eitan Okun. *Bioinformatics*. 2016 Nov 1;32(21):3314-3320. doi: [10.1093/bioinformatics/btw376](https://doi.org/10.1093/bioinformatics/btw376).

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BUNS Manual

A. Extract data from your tracking software:

1. AnyMaze (*.slk files).
2. EthoVision (*.xls / *.xlsx files).

B. Order your files by day, strain, treatments etc. in different folders.

C. Insert the details of your project:

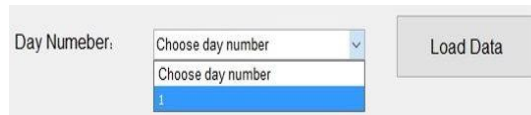
1. Project's name: in letters only (myProject).
2. Table's diameters: in centimeters (150).



A screenshot of a form with three fields: 'Project Name:' with a text input box, 'Table's Diameter:' with a text input box followed by 'cm', and 'Tracking software' with a dropdown menu showing 'Choose tracking software'.

3. Select your tracking software: AnyMaze or EthoVision.

D. To add data to the panel, add a new day by choosing a day number. You can always add new trials to existing days. Click Load Data.

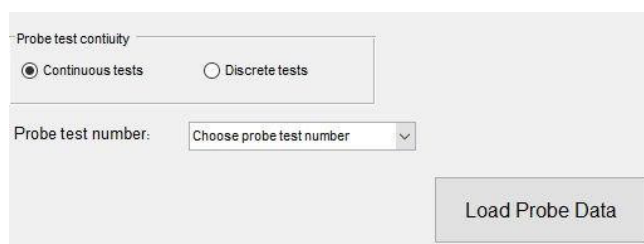


A screenshot of a form with a 'Day Number:' label, a dropdown menu showing 'Choose day number', and a 'Load Data' button.

E. Browse and select your files for chosen day, .slk files for AnyMaze and .xlsx for EthoVision.

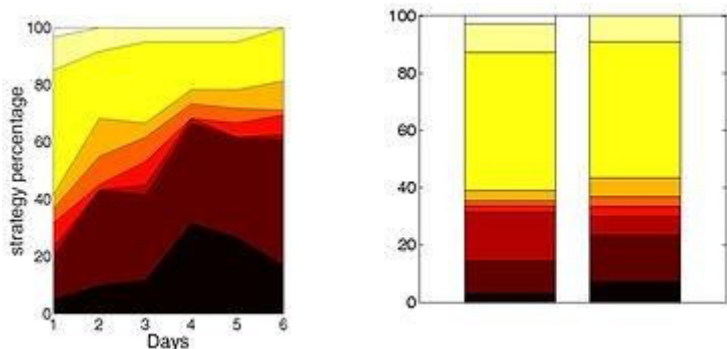
F. You can add a Probe test to your analysis, even without adding any acquisition phase data at the previous stage:

1. Click Add a probe test.



A screenshot of a form with two radio buttons: 'Continuous tests' (selected) and 'Discrete tests'. Below it is a 'Probe test number:' label and a dropdown menu showing 'Choose probe test number'. A 'Load Probe Data' button is at the bottom right.

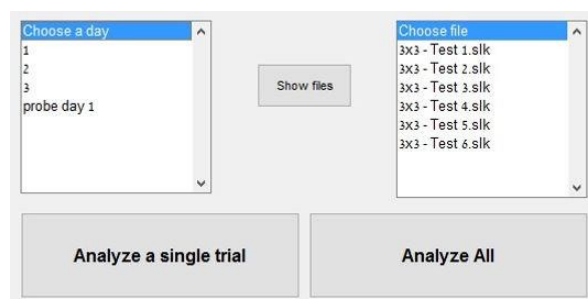
2. Choose a continuous or discrete analysis:



4. Load your probe data by day as described earlier.

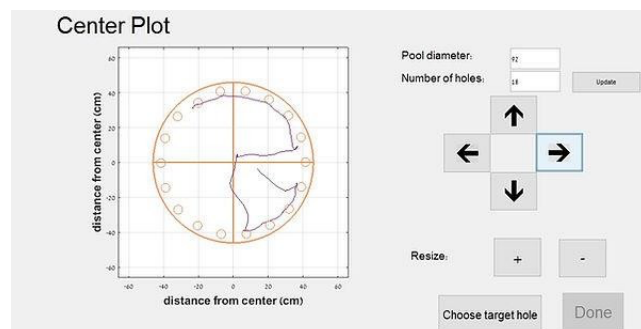
G. On the Days panel, a list of days and probe days will appear.

H. By choosing a day and clicking on Show files you will be able to choose a file and Analyze a single trial.



I. By clicking on Analyze all, BUNS will analyze all your data by days and probe tests.

J. A panel will open, asking you to center 3 or less trials and choose a target hole. You will be able to move and resize the plot. This stage repeats itself 3 times.

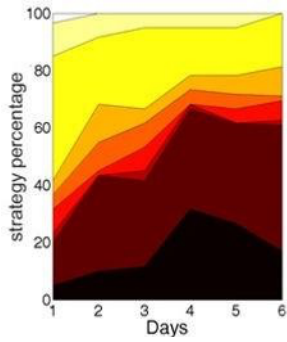


J. Now the analysis is taking place!
this might take a few minutes.

K. Once the graphs appear, you can save it by clicking on Export graph.

L. You can also save an excel file including trials details and cognitive scores.

Export results to excel file Export graph



To receive download instructions, please send an email to: Eitan.okun@biu.ac.il