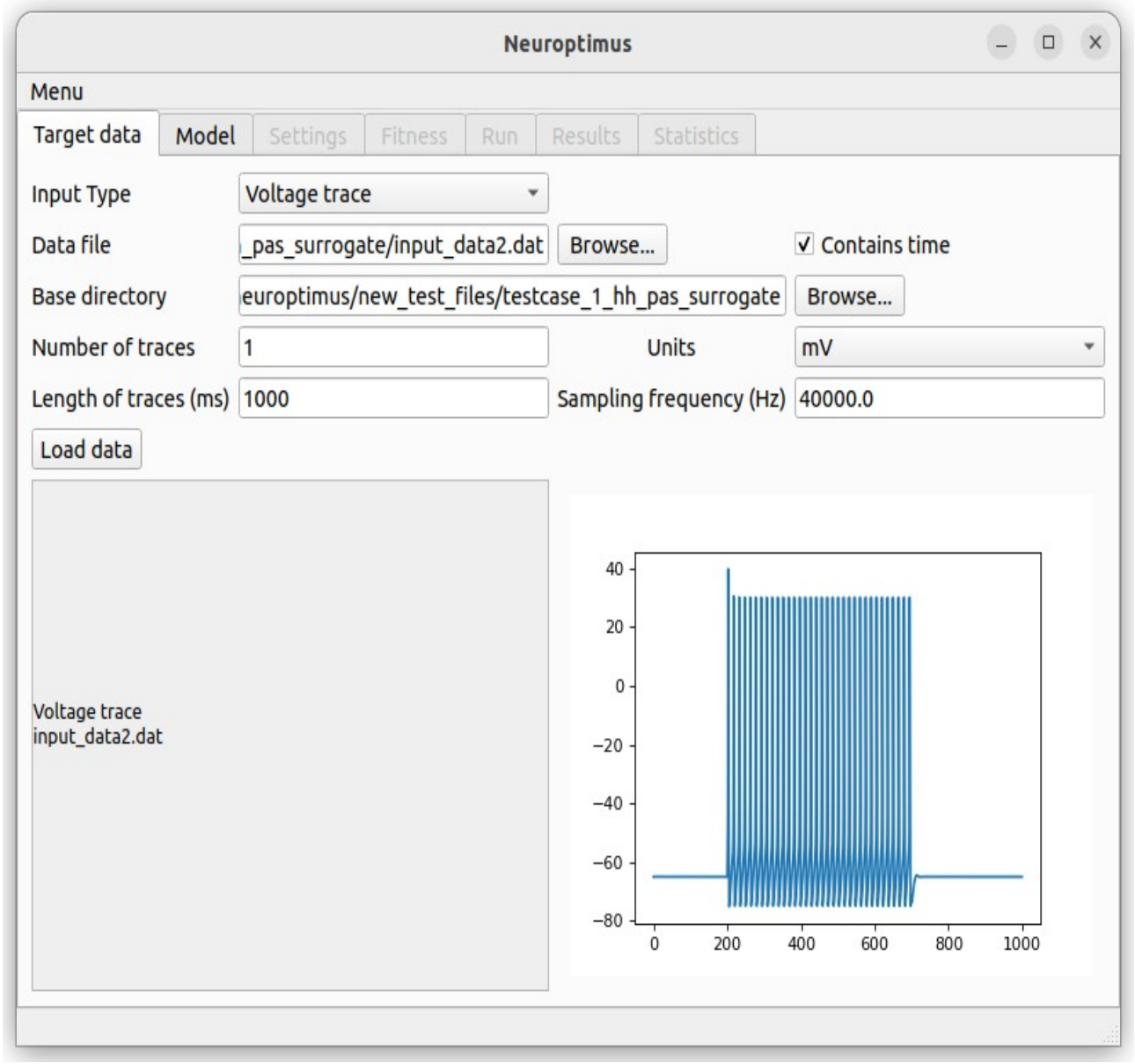
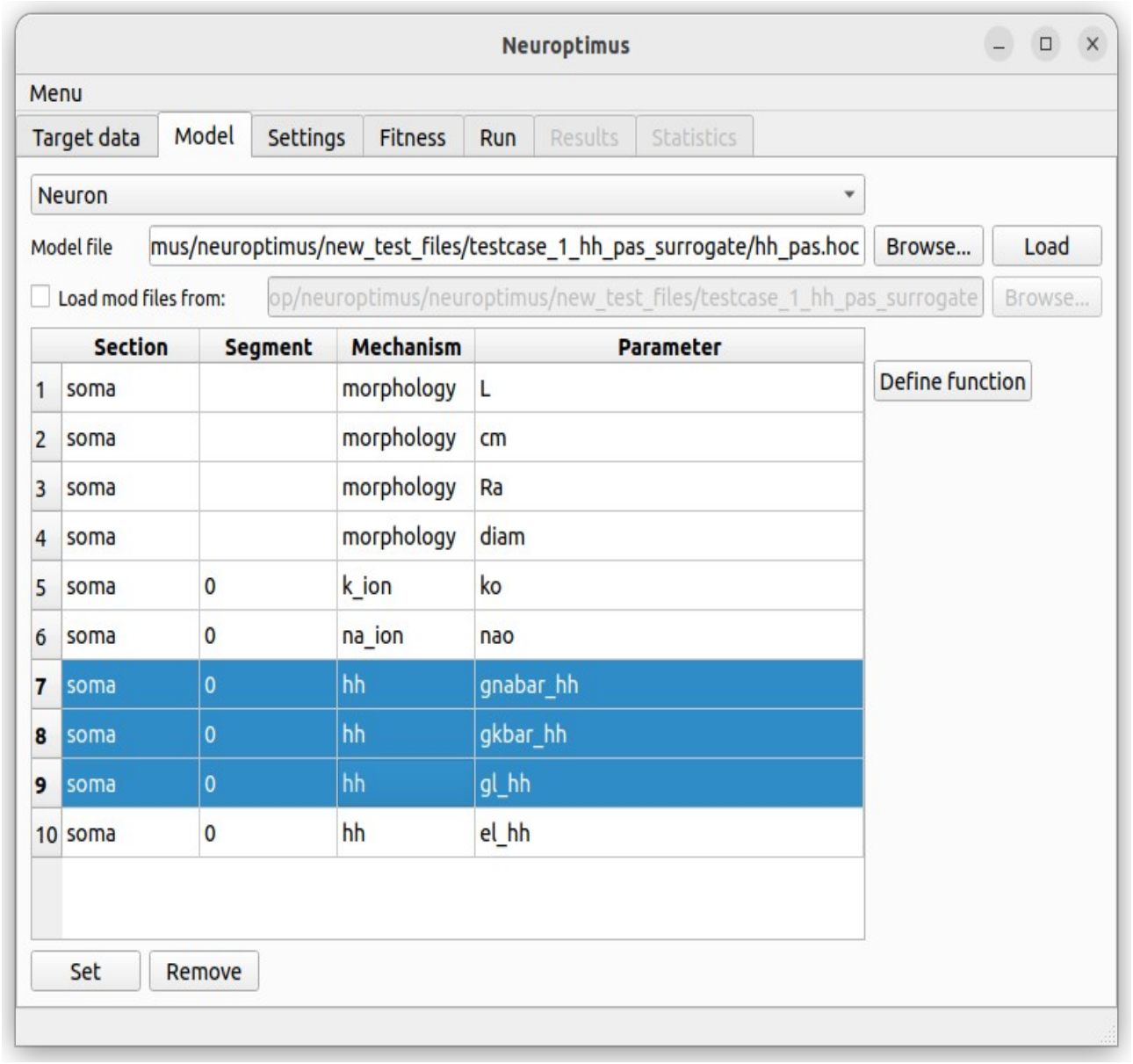
Summary of example:
The data file has one trace, which is 1000 ms long and the sampling frequency was 40kHz.
The data file also contains the time and was obtained from the corresponding model by using an IClamp (connected to the middle (0.5) of the soma) with the following parameters:
stim.del=200
stim.dur=500
stim.amp=0.3
The following model parameters were set (the others are default):
gnabar_hh=0.1
gkbar_hh=0.03
gl_hh=0.0001

input file: "input_data2.dat"
model: hh_pas.hoc

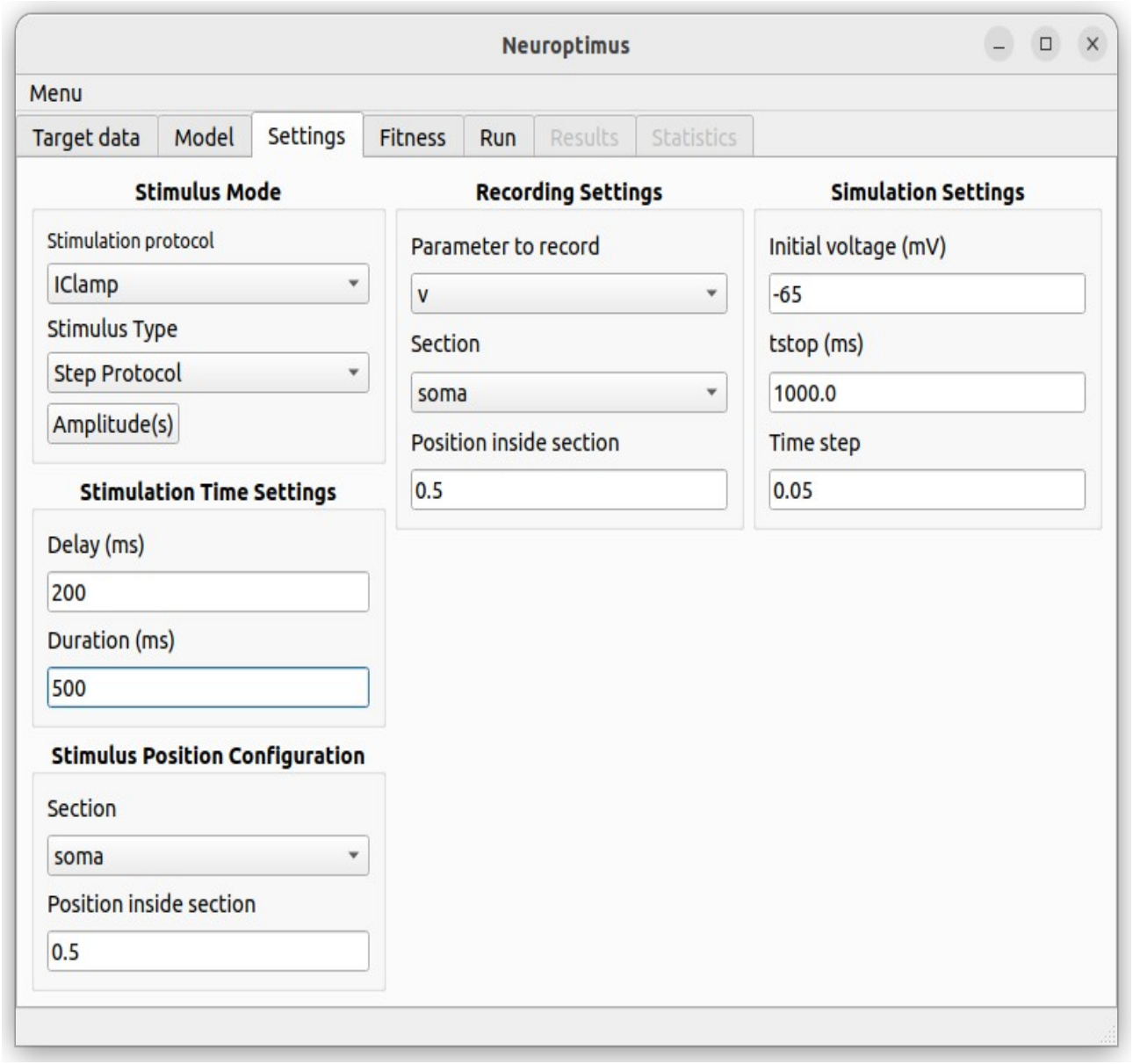
Step-by-step instructions to run the example from the Neuroptimus GUI:
Run „python3 neuroptimus.py -g” to start the GUI



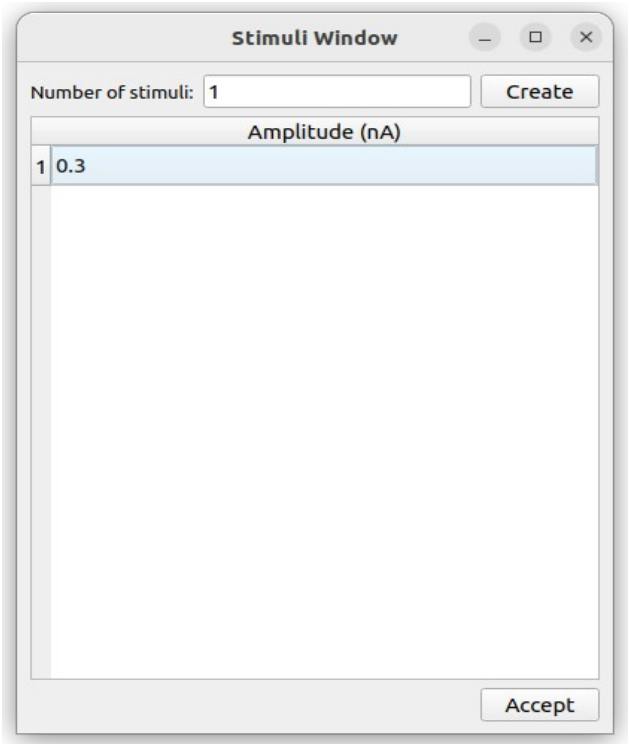
At ’Data File’ load the target data, at ’Base Directory’ choose the directory where you want to save the results. Fill out all the cells and press ’Load data’. Go on by pressing the Model Tab.



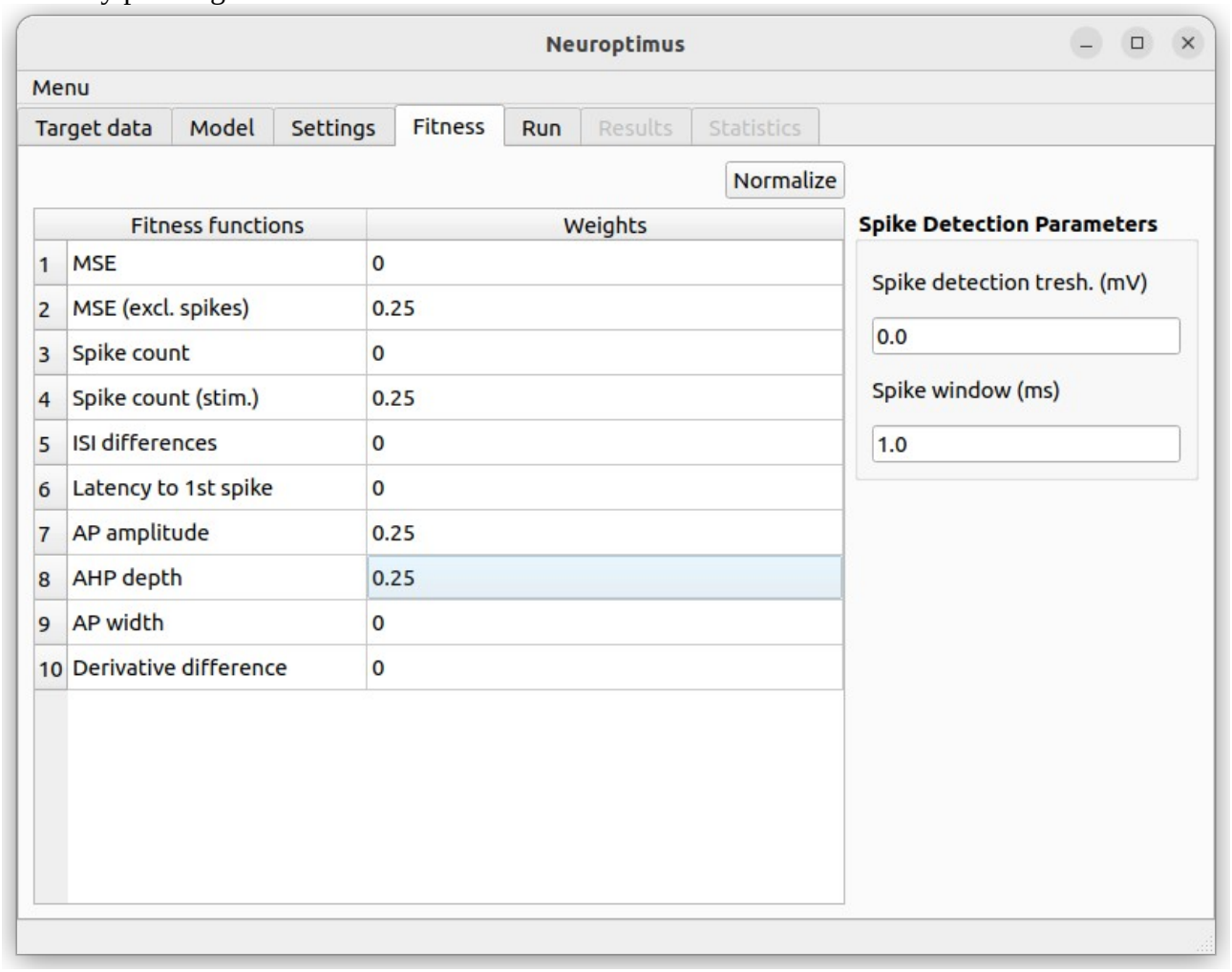
Browse to the model file and load the model. Select the parameters, then press ’Set’.
Go on by pressing the Settings Tab.



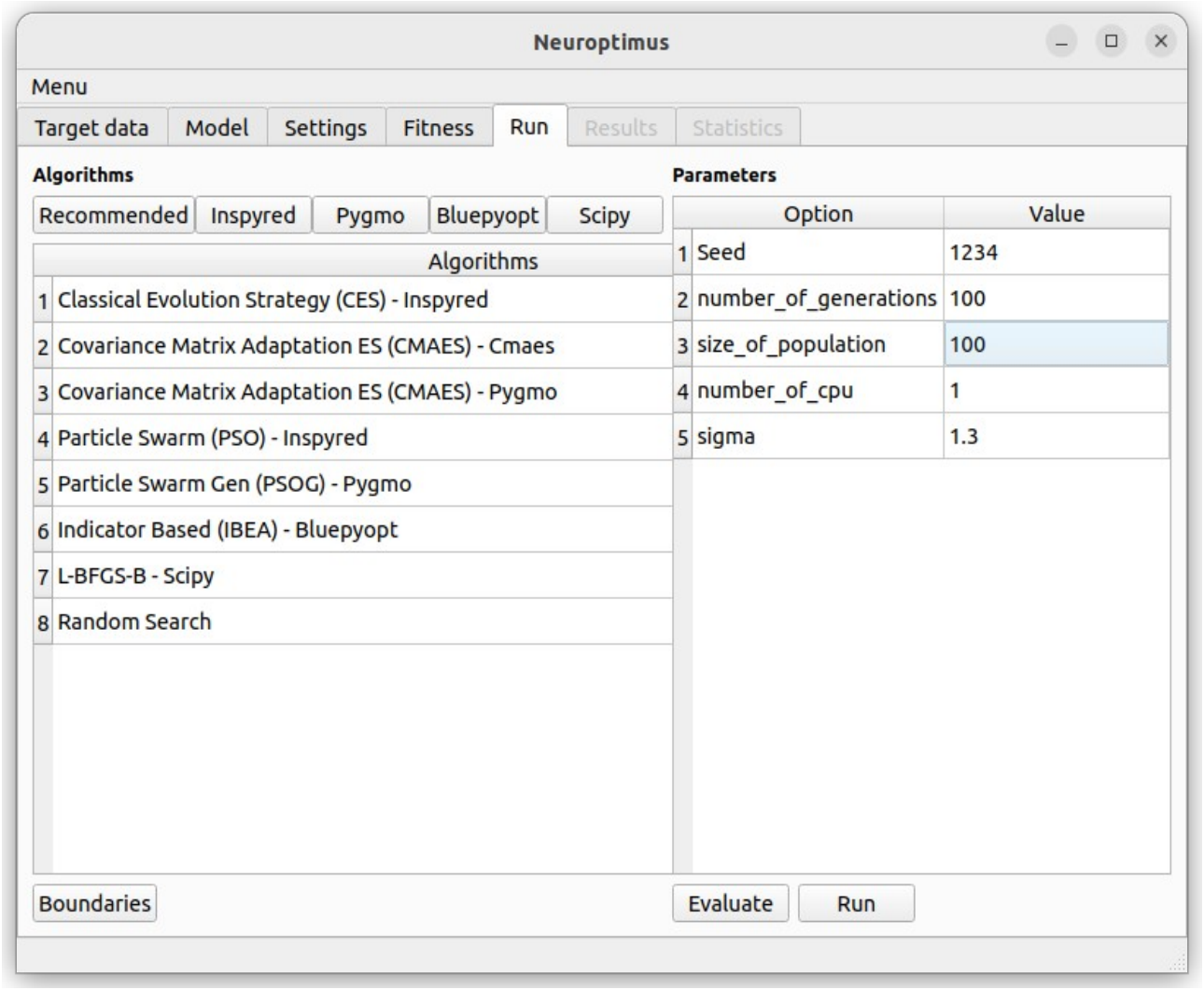
Fill in all the cells. Press ’Amplitude(s)’ to open a new window. and set the amplitude of the stimulus.



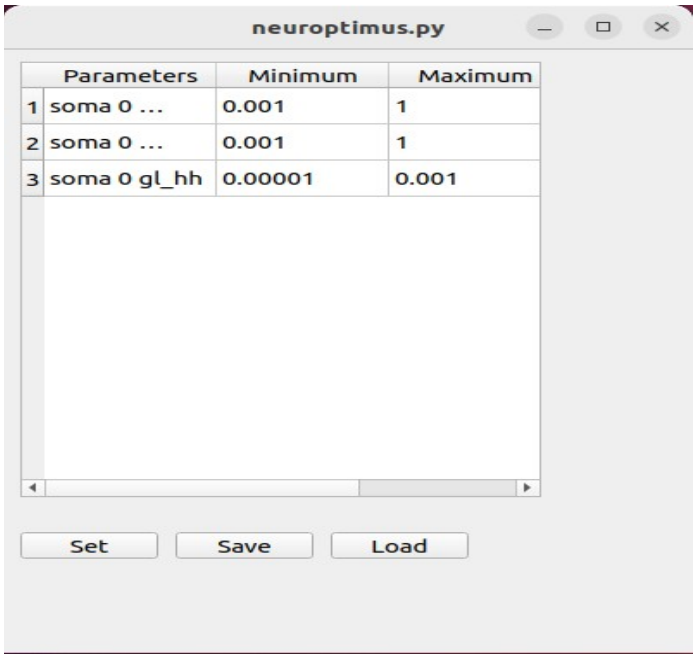
Go on by pressing the Fitness Tab.



Choose fitness function(s), and define their weights. Go on by pressing the Run Tab.



Select an algorithm, and set its parameters.
Press the ’Boundaries’ button to define the boundaries of the parameters to be optimized:
Press ’Set’.
Boundaries can also be loaded from a file.



Start the optimization pressing the ’Run’ button.