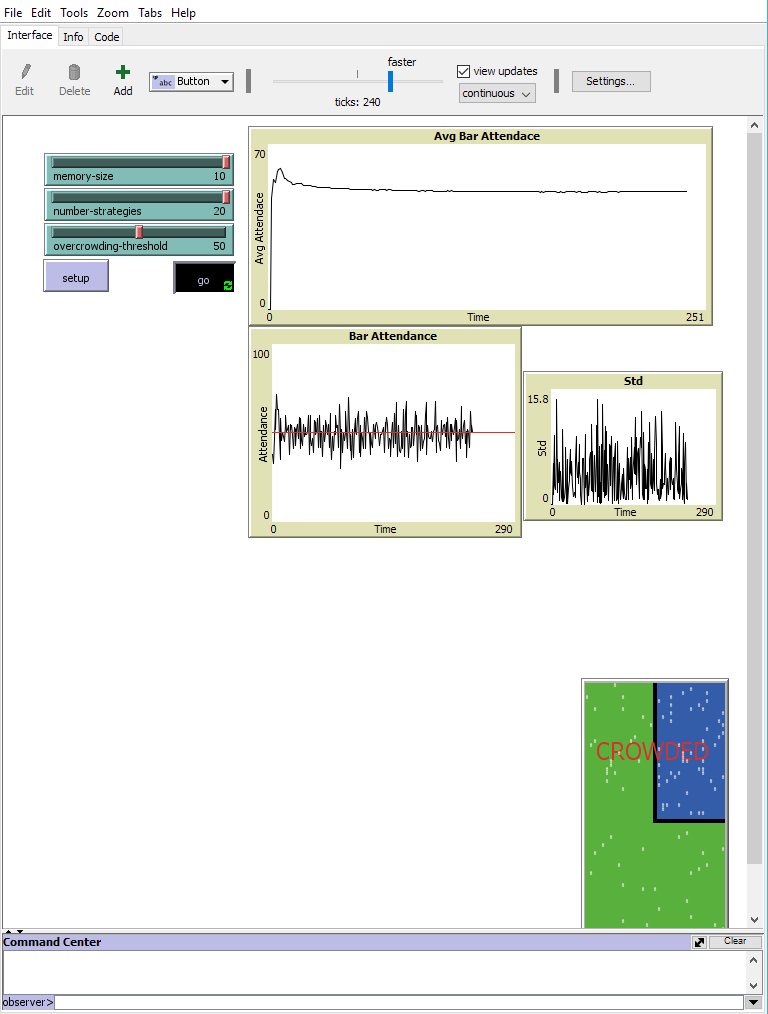
ABM with Netlogo

Netlogo is a multi-agent programmable modelling environment. The language used is very simple and thus allows rapid prototyping. Controlling of important parameters is very intuitive and batch runs of models with multiple permutations of parameters is also possible.



Program Life cycle goes as: -

turtles-own->Setup Function -> Go function -> end function (not compulsory)

turtles-own: -

sets up all the variables associated with each turtle.

Setup function: -

Initialize the environment / variables

Go function: -

Things to do when each tick happens (clock advances by one).

In El- farole: -

1)

Each agent has the following properties: -

Strategies => basically list of previous attendances of that agent of previous ticks

best-strategy => weighted sum of previous attendances used for predicting attendance

prediction => Agent’s choice of going or not going in the current tick

code: -

turtles-own [

strategies

best-strategy

attend?

prediction

]

2)

In the setting up function: -

Clear all previous data in the model and start the clock.

Initialize all agents with an initial value of attendance(randomly) and create a memory list which will store their attendance values for memory-size ticks.

The best strategy for tick 0 will be given the value of the attendance at Tick 0

Code: -

to setup

clear-all

set history n-values (memory-size \* 2) [random 100]

set attendance first history

create-turtles 100 [

set strategies n-values number-strategies [random-strategy]

set best-strategy first strategies

update-strategies

]

reset-ticks

end