In this section, we present a series of numerical experiments to test the performance of the proposed model. We consider a test case with 2 parking owners, with 5000 and 4800 parking lots, respectively. The agency updates parking prices every 1 hour, within a 24-hour time period in a reservation horizon (we have 24 decision epochs form 0 to 23):

At each decision epoch, depending of its time distance to the end of the reservation horizon , we can consider M times to start the parking (for instance if we are in at decision epoch 3 the vehicle can reserve the parking lot for any time between 4 to 24):

Moreover, the vehicles reserve parking lots for a specific period of time. We call it reservation duration, and it starts from the time that the vehicle start its parking. Depending on decision epochs and the parking starting time the vehicle can reserve the parking lot for a time period that is defined as follows:

Therefore, the parking lots can be reserve for 1 period of time to 23 periods of time, depending on their start time.

Based on the above description, we have overall demands of type for parking lots. So, we have a certain amount of people that want to park, We generate the demands using uniform random function,

And, Driver always picks parking lot with the lowest price. Each driver will decide to park or not to park. Driver will observe the lowest price and the park/no park policy is a simple threshold. If lowest price is above threshold, do not park. Here, we consider 5 dollars/hour as the threshold.

Each parking owner uses the following pricing policy function to generate its price for , :

We generate the parameters , using the following normal random generator:

Then, the reward of each parking owner at , is calculated as follows:

Where, the is equal to the number of drivers that choose parking at.

Then we calculate the summation over at each decision epoch .