

RBE 500 Homework #8

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Bayes Filter Report

Here, we describe the Bayes Filter implementation.

```
1  ---- Starting HW8 Bayes Filter ----
2
3  The initial beliefs are:
4  bel(open) = 0.5
5  bel(closed) = 0.5
6  -----
7  Iteration 1:
8  The given action is do.nothing and given measurement is closed
9  The updated beliefs are:
10 bel(open) = 0.3333333333333333
11 bel(closed) = 0.6666666666666666
12 -----
13 Iteration 2:
14 The given action is open and given measurement is closed
15 The updated beliefs are:
16 bel(open) = 0.7647058823529411
17 bel(closed) = 0.23529411764705882
18 -----
19 Iteration 3:
20 The given action is do.nothing and given measurement is closed
21 The updated beliefs are:
22 bel(open) = 0.6190476190476191
23 bel(closed) = 0.38095238095238093
24 -----
25 Iteration 4:
26 The given action is open and given measurement is open
27 The updated beliefs are:
28 bel(open) = 0.9732441471571905
29 bel(closed) = 0.026755852842809368
30 -----
31 Iteration 5:
32 The given action is do.nothing and given measurement is open
33 The updated beliefs are:
34 bel(open) = 0.9909194097616345
35 bel(closed) = 0.009080590238365497
```