

Input Maze, Colors, and Robot Location:

```
#...
...#
#...
#..#

\colors r g b y r g b y r g b y r g b y
\robot 2 0
```

Results from Filtering with num_iter = 3:

```
robot location [2, 0]
sensed color: b
[0.0, 0.0025, 0.055, 0.0025, ]
[0.0025, 0.0025, 0.055, 0.0, ]
[0.0, 0.0025, 0.055, 0.0025, ]
[0.0, 0.0025, 0.055, 0.0, ]

#A.
...#
#...
#..#

robot moving east
robot location [1, 0]
sensed color: g
[0.0, 0.00165, 0.001675, 0.0006, ]
[7.5e-05, 0.01375, 0.0011250000000000001, 0.0, ]
[0.0, 0.01375, 0.001675, 2.5e-05, ]
[0.0, 0.01375, 0.0016500000000000002, 0.0, ]

#A..
...#
#...
#..#

robot moving west
robot location [2, 0]
sensed color: b
[0.0, 0.0001705, 0.0013475, 2.875e-05, ]
[7.499999999999999e-06, 0.000287, 0.0036410000000000006, 0.0, ]
[0.0, 0.00042925000000000005, 0.0009845000000000001, 2.5000000000000004e-07, ]
[0.0, 0.000429, 0.0010945, 0.0, ]

#A.
...#
#...
#..#
```

```
[0.0, 0.02025000742302325, 0.16004038124647404, 0.003414590694498055, ]
[0.0008907627898690578, 0.034086522758989275, 0.432435642388432, 0.0, ]
[0.0, 0.050981323673505746, 0.11692746221681168, 2.9692092995635264e-05, ]
[0.0, 0.05095163158051011, 0.12999198313489116, 0.0, ]
```

Results from Viterbi Algorithm:

```
['b', 'g', 'b']
3
Viterbi algorithm found path: [(2, 1), (1, 1), (2, 1)]
#...
..A#
#...
#..#

#...
.A#
#...
#..#

#...
.A#
#...
#..#
```