





**Current State** 

Cell(0,0)

This specific journey produces the following sensor readings assuming zero error:

> SENSOR READINGS:

## Filtering: Given sensor readings:

**Initial State** 

0.0625	0.0625	0.0625	0.0625
0.0625	0.0625	0.0625	0.0625
0.0625	0.0625	0.0625	0.0625
0.0625	0.0625	0.0625	0.0625

Loop through sensor readings:

Prediction vector for sensor reading: Blue - (E(t))

0.88	0.88	0.04	0.04
0.04	0.04	0.04	0.04
0.88	0.88	0.04	0.04
0.04	0.88	0.88	0.88

## Initialize Transition Vector

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

For each cell, loop through 16 transition phases:

	Transition(i)				
	0.5	0.25	0	0	
Transition Vector +=	0.25	0	0	0	
Transition vector +=	0	0	0	0	
	0	0	0	0	

I ransition(i)						
	0.25	0.25	0.25	0		
	0	0.25	0	0		
	0	0	0	0		
	0	0	0	0		

*	Cell(0,1)
·	0 0 11 (0 , 1 )

**Current State** 

	Transition(i)			
	0	0	0	0
	0	0	0	0
	0	0	0	0.25
, ,	0	0	0.25	0.5
,				

**Current State** 

Cell(3, 3)

Prediction Vector = Prediction Vector \* Transition Vector

Current State = Normalize(Prediction Vector)

Print(Current State)

Print(Ground Truth)