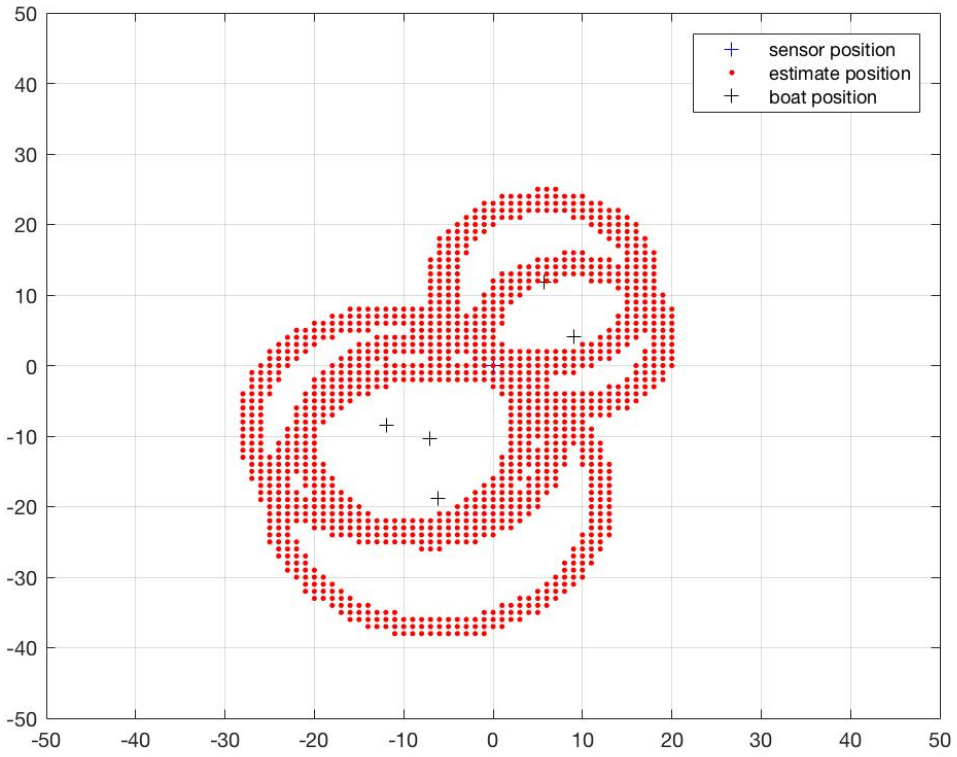
Weekly report

My *Accomplishments* this week

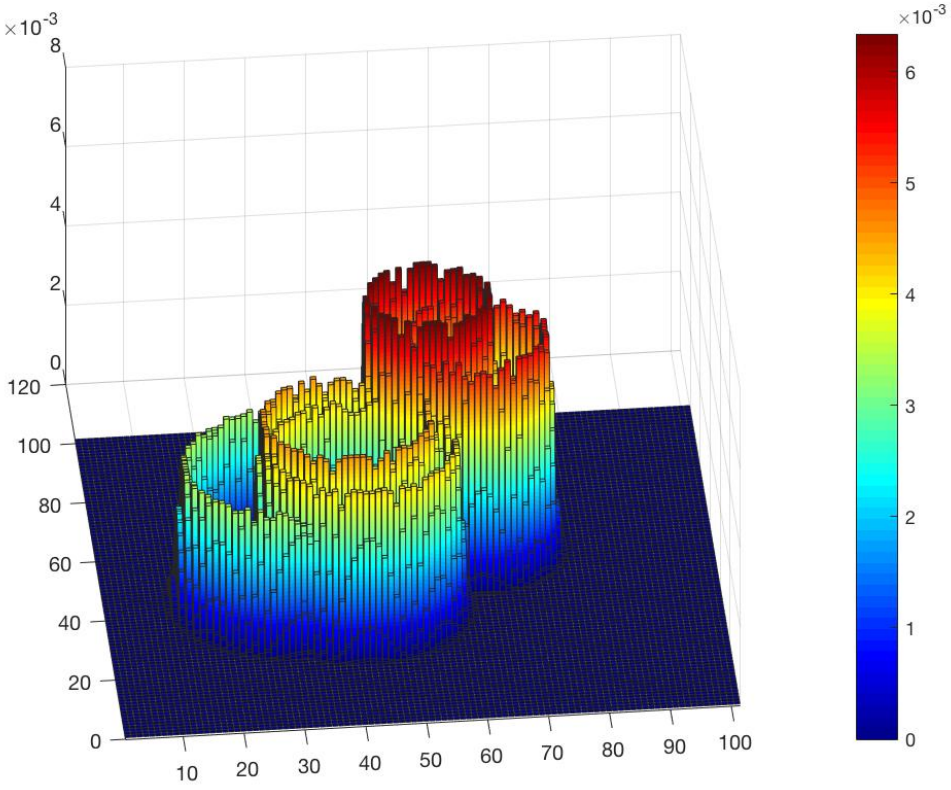
- **"BayesDemonstration" code (update to Github)**
- **"Mcl2Dlocalzation" code (update to Github)**
- **"Localize1Dkalman" code (update to Github)**

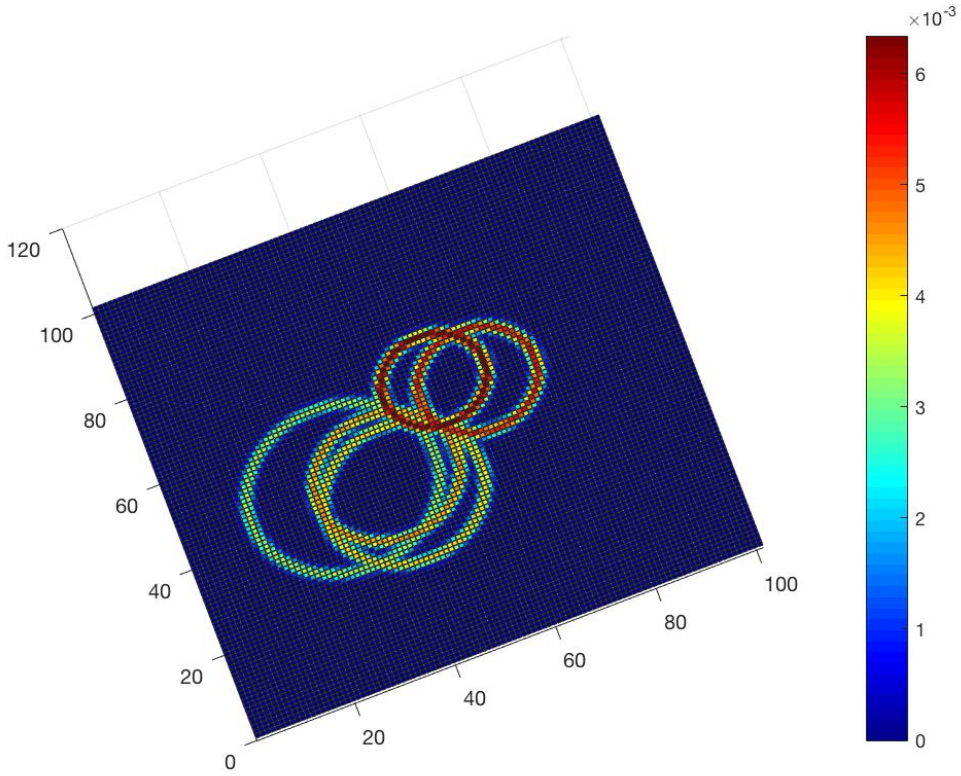
Here is the result of the "BayesDemonstration" code:

2D image:



Histogram image:





What I need Dr. Becker to do:

```
function newProb = BayesianUpdateScan(oldProb, scan, pos)
    %P(x|s) = P(s|x)P(x);
    %       = P(s_right|x)*P(s_up|x)*P(s_left|x)*P(s_down|x)*P(x)
    newProb = ProbOfScanGivenPosition(scan(1), pos +[1,0] ) *...
        ProbOfScanGivenPosition(scan(2), pos +[0,1] ) * ...
        ProbOfScanGivenPosition(scan(3), pos +[-1,0] ) * ...
        ProbOfScanGivenPosition(scan(4), pos +[0,-1] ) * ...
        oldProb;
end
```

- **first, the bayes rule used in your code is not right, because the euquation is not satisfied.**
  P(X|S) != P(S|X)*P(X)
- **second, u want me to update probability weight by Bayes rules.**
  I have questions about that:
  each time measurement is independent, first time we get probability of state A_1 given measurement B_1, P1=P(A_1|B_1). Second time we get P2= P(A_2|B_2). There is intersection parts of two times result, because of independent, P(P2|P1)=P1*P2/ P1=P2 = P(A_2|B_2). Thus, the result is P2 for the second time measurement, Is that right?