Truong Le, Johannes, 03637523

Assignment 1

Exercise 1.a-b)

K =2

p1 = 5

p2 = 3

Par(1) = 0,00220625732556191, 0,921732195858899, 0,00657348550645988, -0,00162656965276821, -0,000991575978557376, 0,00248490664424062, 0,00231358751656309, -1,16646541581994e-05, -0,0130056609219629, 0,000122681135091482, 1,28355799646608e-05, -0,00445663266774573, -4,30989334269237e-05, 1,66957256114672e-06, 0,00259767597943075, -4,02394497236495e-07

Par(2) = -0,00269493977200835, -0,00135809592112292, -0,0115383171659965, 0,473042321915387, 0,000244539456730237, -0,00826729432491260, 7,46931348181474e-05, 4,38102067757845e-05, 0,0164373055385547, -0,000976996332548379, -5,28891350696488e-06, 0,00429852335997511, -4,41870625679270e-06, -2,69105974566414e-07, -0,00381272453688412, 2,10157140577384e-06,

par(3) = -0,000595151484125031, -0,000171073749124458, 0,999714709020229, 0,000839355025048976, 0,000126866877646435, 0,00178272525920993, -0,000141046904408989, -4,52228930367164e-06, -0,000622237972551080, -1,32208929849429e-05

K=5

p1 = 4

p2 =1

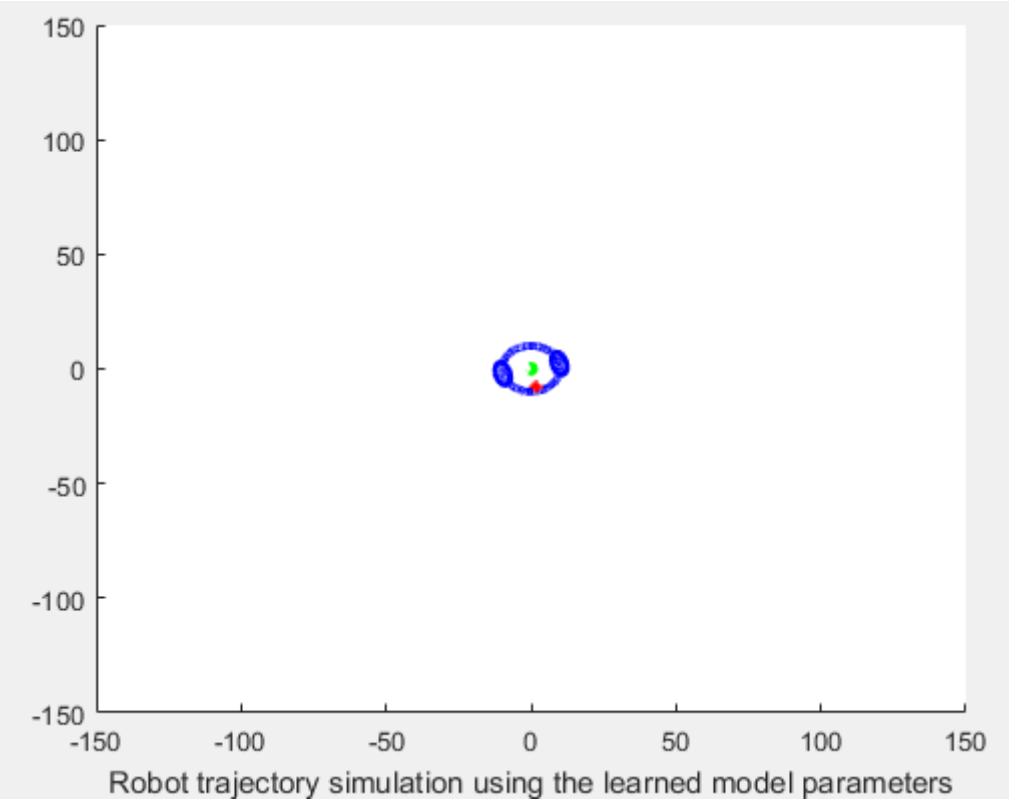
par1 = 0,00250438198744817, 0,919758171529199,-0,00285535207851201, -0,000743846577077325,-0,00103415346607633, 0,00137429795052564, 0,00248687885776967, 0,000136005129586932, -0,000269081593446587, 6,69261198540719e-05, 1,30609808751858e-05, -0,00428157284345879, -4,51742614704263e-05

par2 = -0,00432378702432522, -0,00100147026158884, 0,00144804828720768, 0,467984381559631, 0,000568498345337264, -0,00252770680607289, -0,00102513134746687, 1,92455105264462e-05, -0,00167419363591913, -0,000672538046125728, -7,84620179300508e-06, 0,00347662125530497, 8,71551716809014e-06

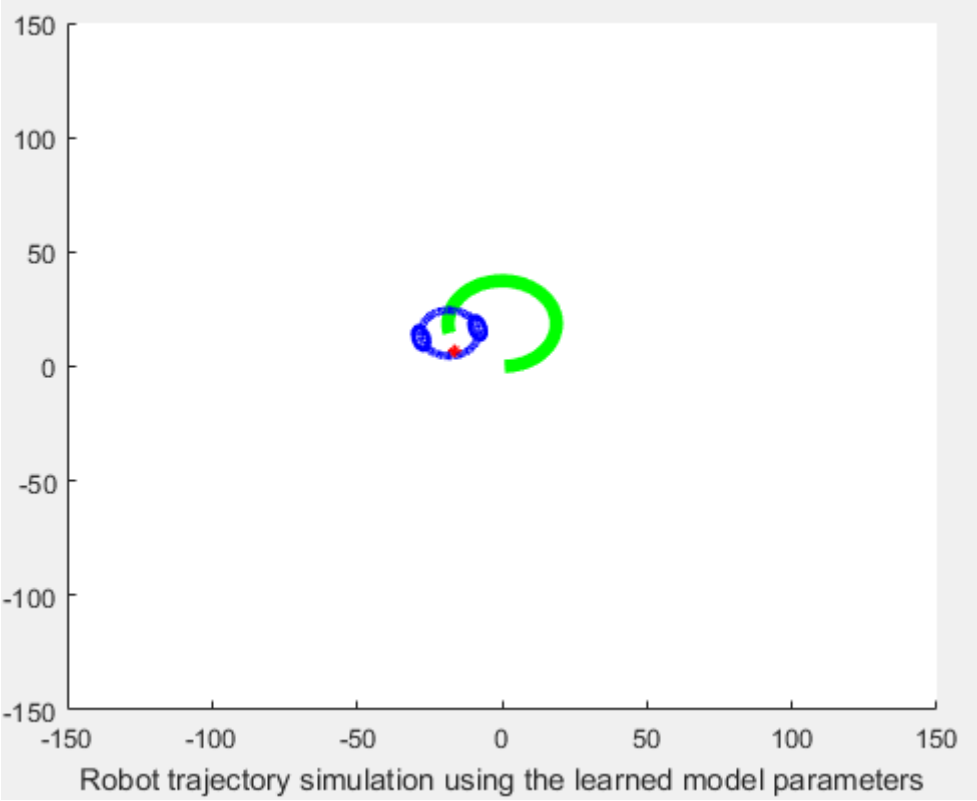
par 3 =0,000807837315929512, -0,000319015102912388, 0,998697948732513, 0,000321416083203673

Exercise 1c)

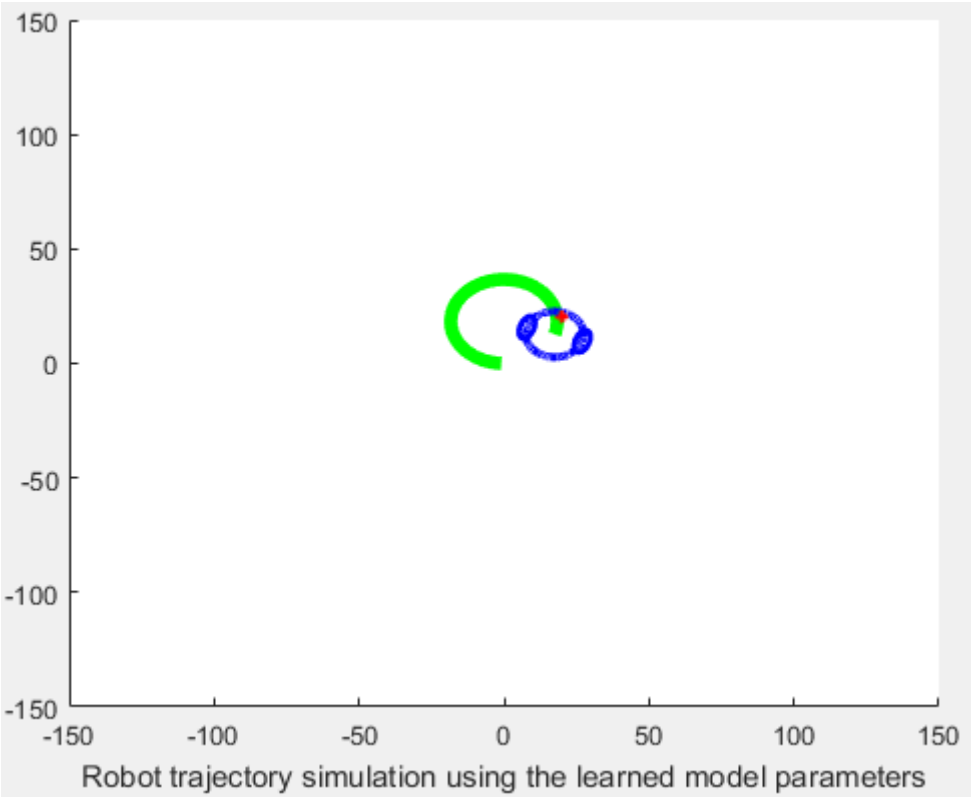
Simulate_robot(0, 0.05)



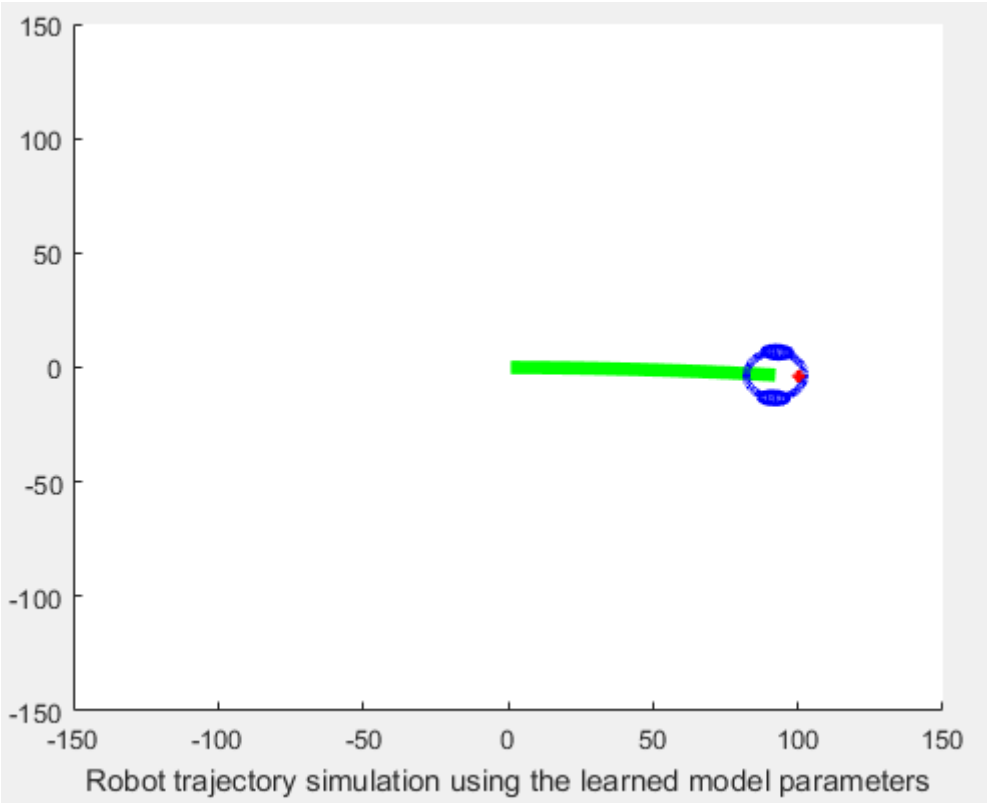
Simulate_robot(1, 0.05)



Simulate_robot(-1, -0.05)



Simulate_robot(1,0)



Exercise 2)

Optimal d = 48

Classification error = 0.0362

Confusion mat =

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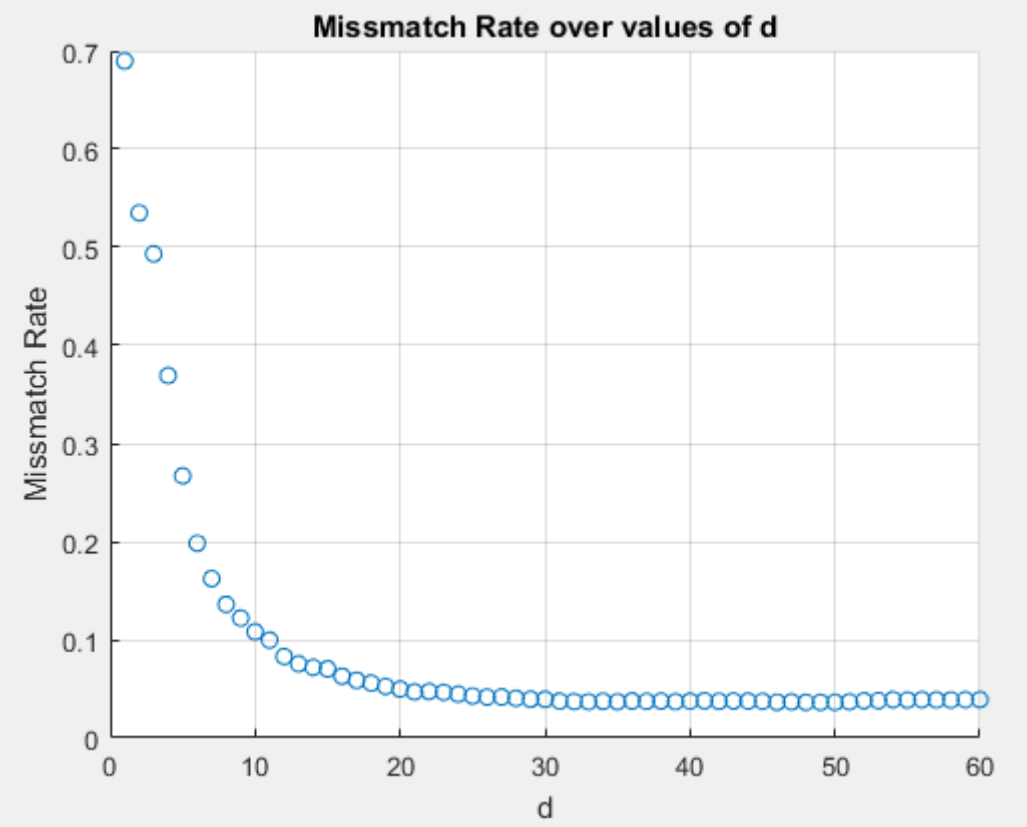
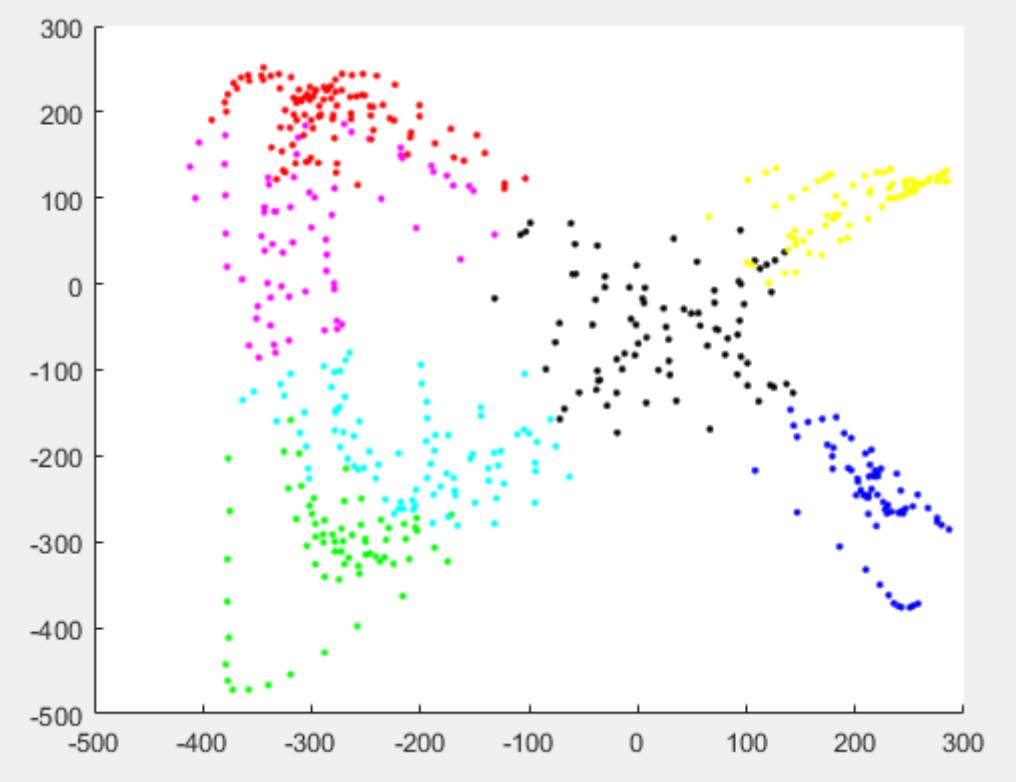
0	1098	11	1	2	1	1	0	21	0
3	0	1001	3	3	0	2	1	18	1
2	0	8	972	0	5	0	2	17	4
1	0	3	0	964	0	3	2	3	6
2	0	1	18	0	859	2	0	10	0
8	1	1	0	3	13	924	0	8	0
1	2	31	1	2	3	0	956	13	19
3	0	7	10	1	5	1	1	941	5
5	1	10	7	10	2	0	6	15	953



Exercise 3)

k-means: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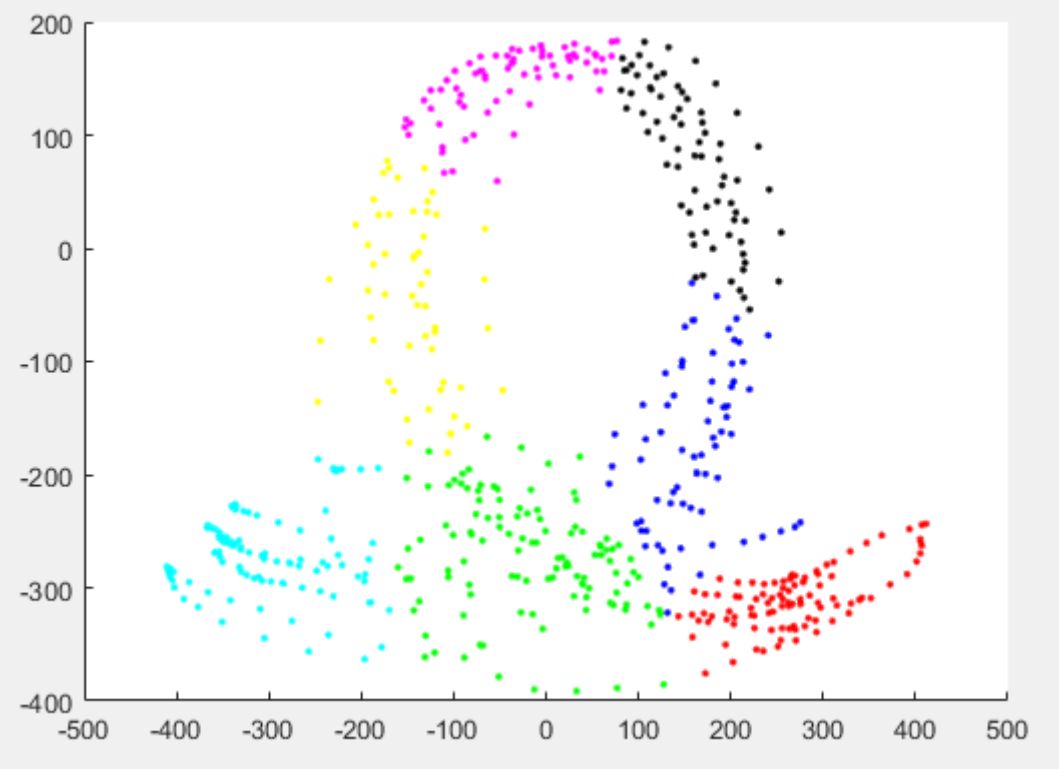
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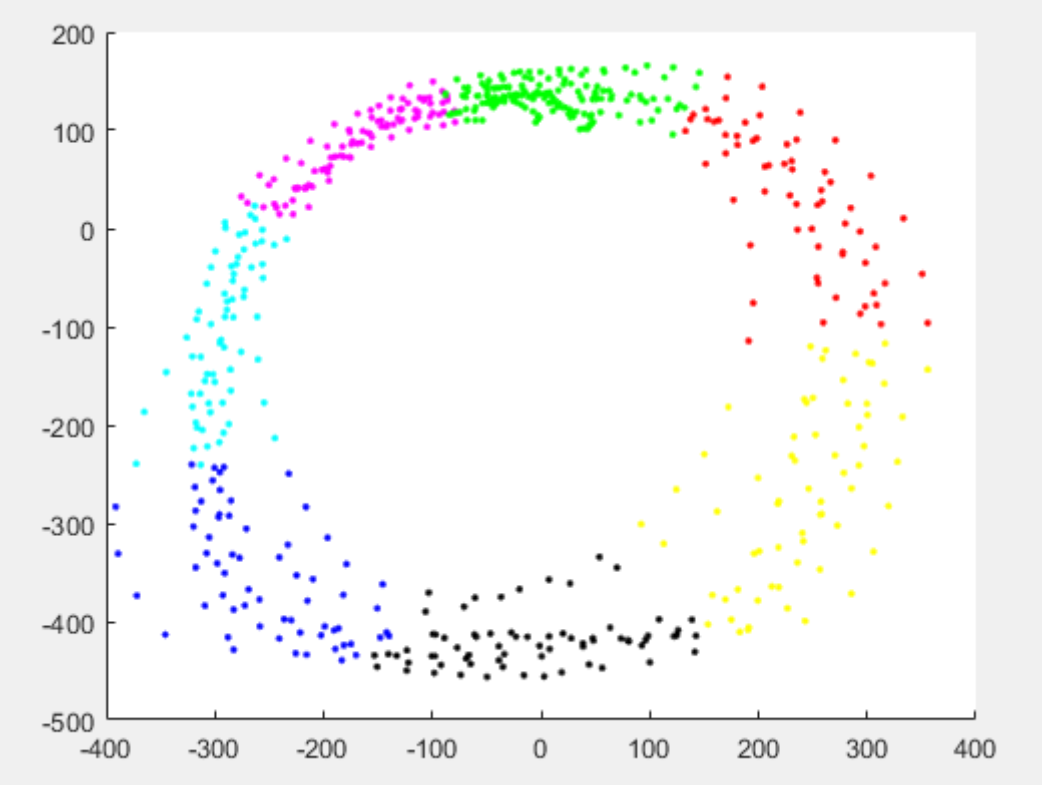
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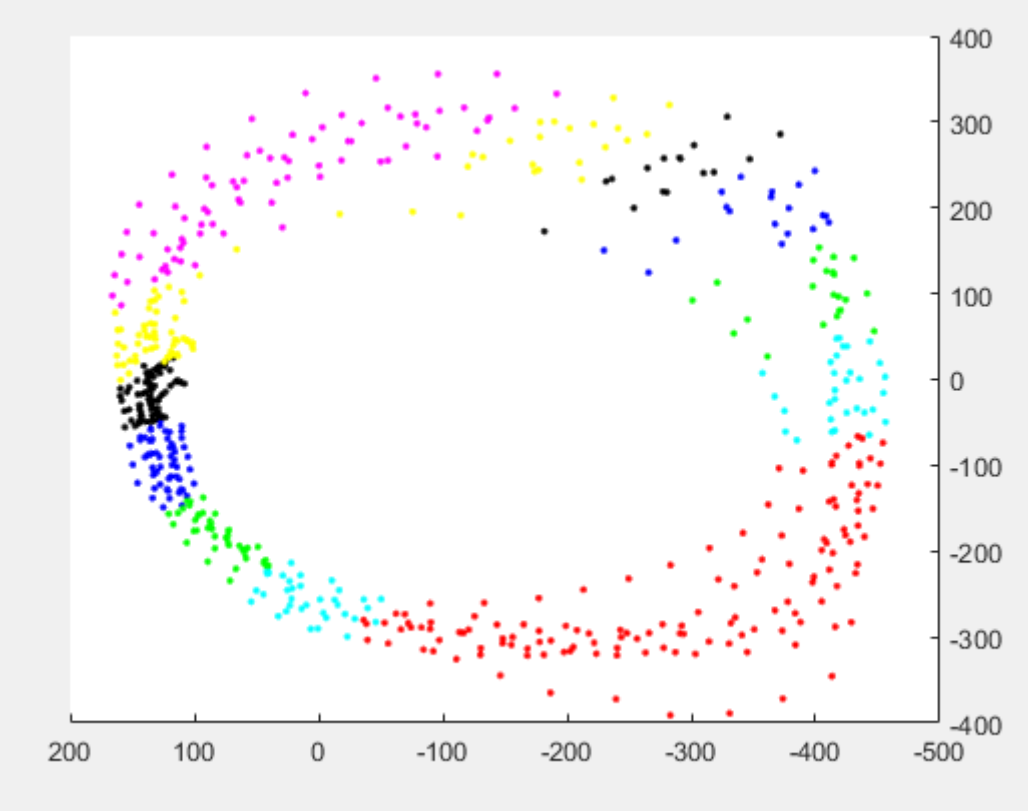
Nubs: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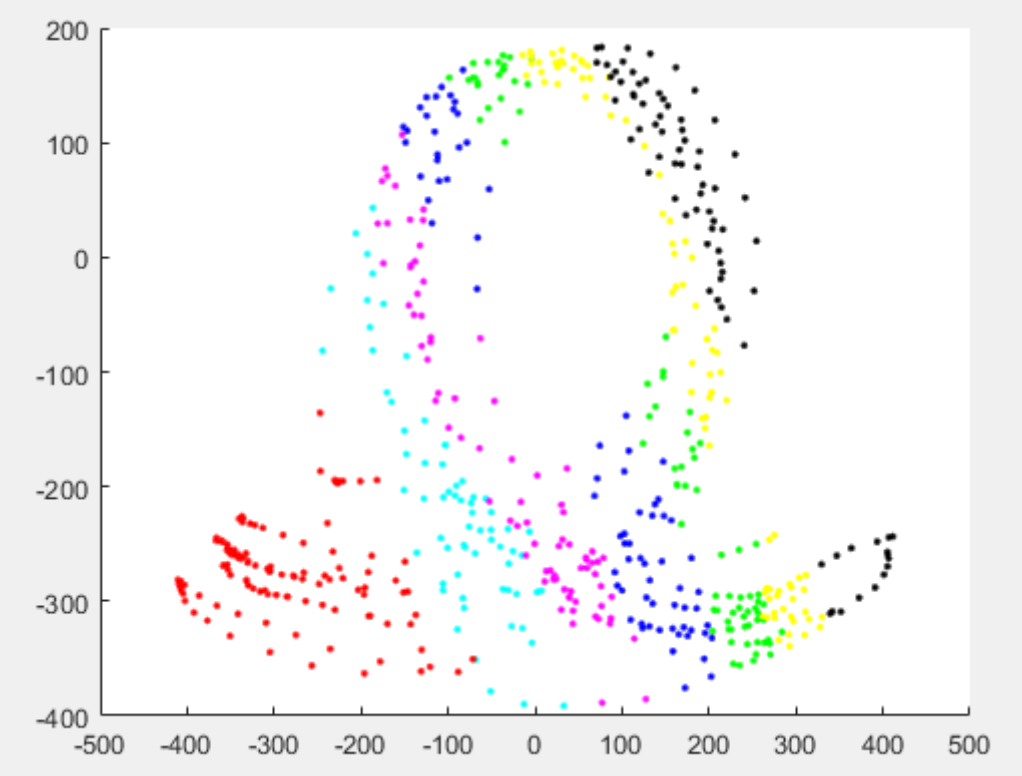
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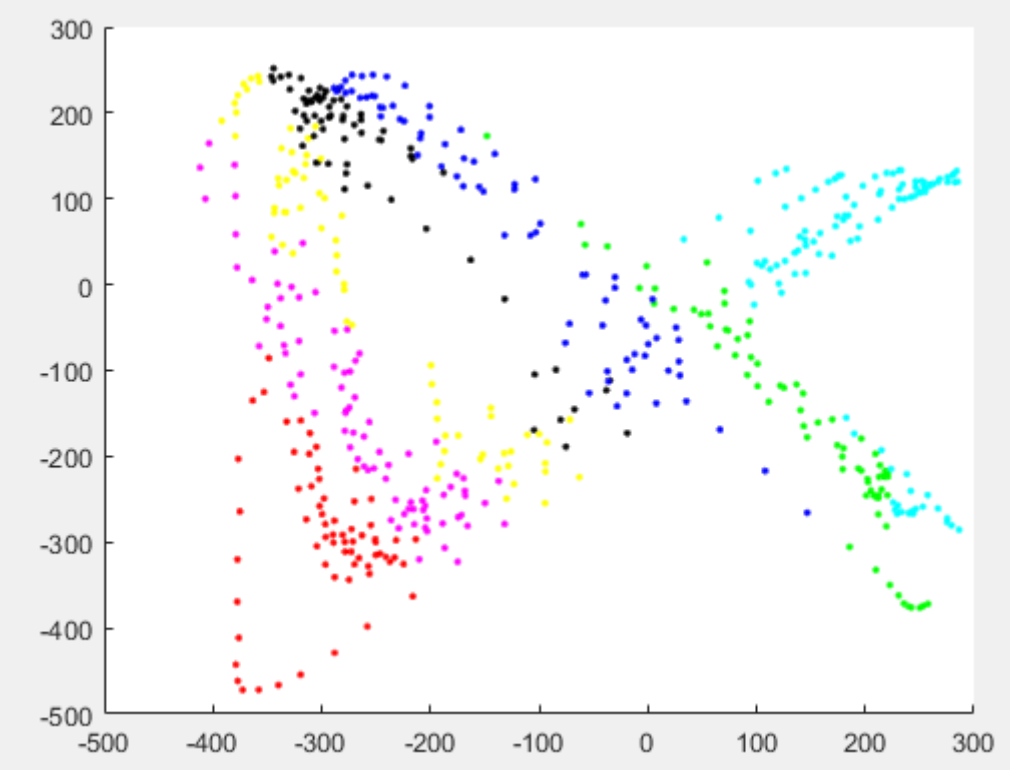
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