record of list pair of x\_i,x\_i+1

hidden\_states original [2 2 2 ... 6 6 6]

x\_i [2, 2, 2, 2, 2, 2, 5, 5, 5, 5, 5, 2, 0, 0, 0, 0, 8, 2, 2, 2, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 0, 0, 8, 8, 8, 8, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 8, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 2, 2, 0, 0, 0, 0, 8, 8, 0, 0, 0, 8, 8, 1, 8, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 2, 5, 5, 2, 2, 2, 2, 2, 8, 2, 2, 2, 2, 2, 2, 2, 2, 2, 5, 2, 2, 2, 2, 2, 5, 5, 5, 5, 2, 2, 2, 2, 2, 2, 8, 8, 8, 8, 8, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 2, 2, 2, 2, 2, 2, 5, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 7, 8, 8, 0, 0, 0, 8, 0, 0, 0, 0, 0, 0, 0, 2, 2, 2, 2, 2, 2, 5, 5, 5, 5, 5, 5, 2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 2, 9, 9, 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List of [[x\_i,x\_i\_plus], number of repetition] [[[0, 0], 1059], [[0, 1], 0], [[0, 2], 45], [[0, 3], 0], [[0, 4], 4], [[0, 5], 0], [[0, 6], 6], [[0, 7], 0], [[0, 8], 18], [[0, 9], 5], [[1, 0], 0], [[1, 1], 348], [[1, 2], 0], [[1, 3], 0], [[1, 4], 0], [[1, 5], 0], [[1, 6], 0], [[1, 7], 3], [[1, 8], 5], [[1, 9], 0], [[2, 0], 44], [[2, 1], 0], [[2, 2], 1924], [[2, 3], 1], [[2, 4], 0], [[2, 5], 108], [[2, 6], 0], [[2, 7], 5], [[2, 8], 18], [[2, 9], 6], [[3, 0], 0], [[3, 1], 0], [[3, 2], 1], [[3, 3], 109], [[3, 4], 0], [[3, 5], 0], [[3, 6], 0], [[3, 7], 0], [[3, 8], 0], [[3, 9], 0], [[4, 0], 5], [[4, 1], 2], [[4, 2], 0], [[4, 3], 0], [[4, 4], 1196], [[4, 5], 1], [[4, 6], 52], [[4, 7], 2], [[4, 8], 16], [[4, 9], 14], [[5, 0], 0], [[5, 1], 0], [[5, 2], 107], [[5, 3], 0], [[5, 4], 0], [[5, 5], 786], [[5, 6], 0], [[5, 7], 2], [[5, 8], 5], [[5, 9], 0], [[6, 0], 5], [[6, 1], 0], [[6, 2], 0], [[6, 3], 0], [[6, 4], 54], [[6, 5], 0], [[6, 6], 2102], [[6, 7], 2], [[6, 8], 24], [[6, 9], 0], [[7, 0], 0], [[7, 1], 2], [[7, 2], 3], [[7, 3], 0], [[7, 4], 3], [[7, 5], 0], [[7, 6], 0], [[7, 7], 627], [[7, 8], 8], [[7, 9], 0], [[8, 0], 18], [[8, 1], 4], [[8, 2], 22], [[8, 3], 0], [[8, 4], 13], [[8, 5], 5], [[8, 6], 28], [[8, 7], 1], [[8, 8], 79], [[8, 9], 3], [[9, 0], 6], [[9, 1], 0], [[9, 2], 3], [[9, 3], 0], [[9, 4], 18], [[9, 5], 0], [[9, 6], 0], [[9, 7], 1], [[9, 8], 0], [[9, 9], 1008]]

Means and Variance of each hidden state

0th hidden state

total number with this hidden state = 78

mean = [-5.52265761]

total time\_domain = 10.63145

1th hidden state

total number with this hidden state = 8

mean = [-4.45950826]

total time\_domain = 3.60025

2th hidden state

total number with this hidden state = 182

mean = [-5.48934462]

total time\_domain = 19.24292

3th hidden state

total number with this hidden state = 1

mean = [-3.36100879]

total time\_domain = 1.2075

4th hidden state

total number with this hidden state = 92

mean = [-5.59508866]

total time\_domain = 12.0194

5th hidden state

total number with this hidden state = 114

mean = [-5.44505682]

total time\_domain = 7.89185

6th hidden state

total number with this hidden state = 85

mean = [-5.56630174]

total time\_domain = 20.73006

7th hidden state

total number with this hidden state = 16

mean = [-4.98599974]

total time\_domain = 6.28423

8th hidden state

total number with this hidden state = 94

mean = [-5.37154521]

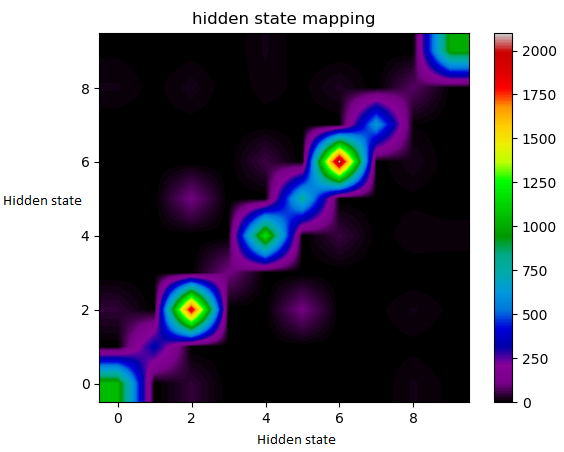
total time\_domain = 0.78931

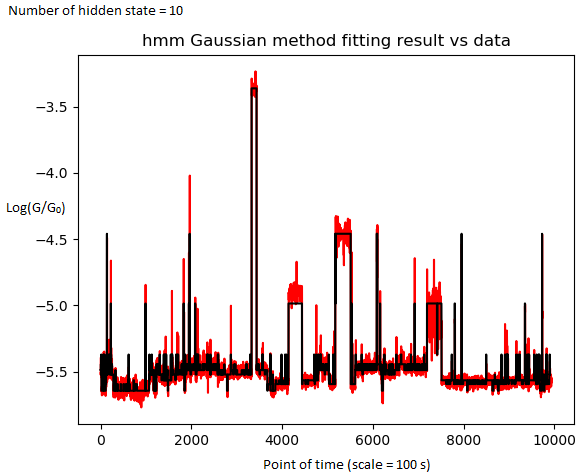
9th hidden state

total number with this hidden state = 28

mean = [-5.64500105]

total time\_domain = 10.14863





|  |  |
| --- | --- |
| Xi | Xi+1 |
| 2 | 2 |
| 2 | 2 |
| 2 | 2 |
| 2 | 2 |
| 2 | 2 |
| 2 | 5 |
| 5 | 5 |
| 5 | 5 |
| 5 | 5 |
| 5 | 5 |
| 5 | 0 |
| 2 | 0 |
| 0 | 0 |
| 0 | 0 |
| 0 | 8 |
| 0 | 2 |
| 2 | 2 |
| 2 | 2 |
| 2 | 9 |
| 9 | 9 |
| 9 | 9 |
| 9 | 9 |
| Etc. | Etc. |