

Exercise 1

Please see the accompanying source code file `Exercise1.m`.

Depending on the initialization of the k-means algorithm, the number of iterations and the initialization of the Gaussian components, your result might differ a bit. Please see Figure 1 for an exemplary result. You can see that in directions with low spatial variance in the data, the fitted Gaussian (on the left side of the plot) has also low variance and has therefore larger probability values above its center.

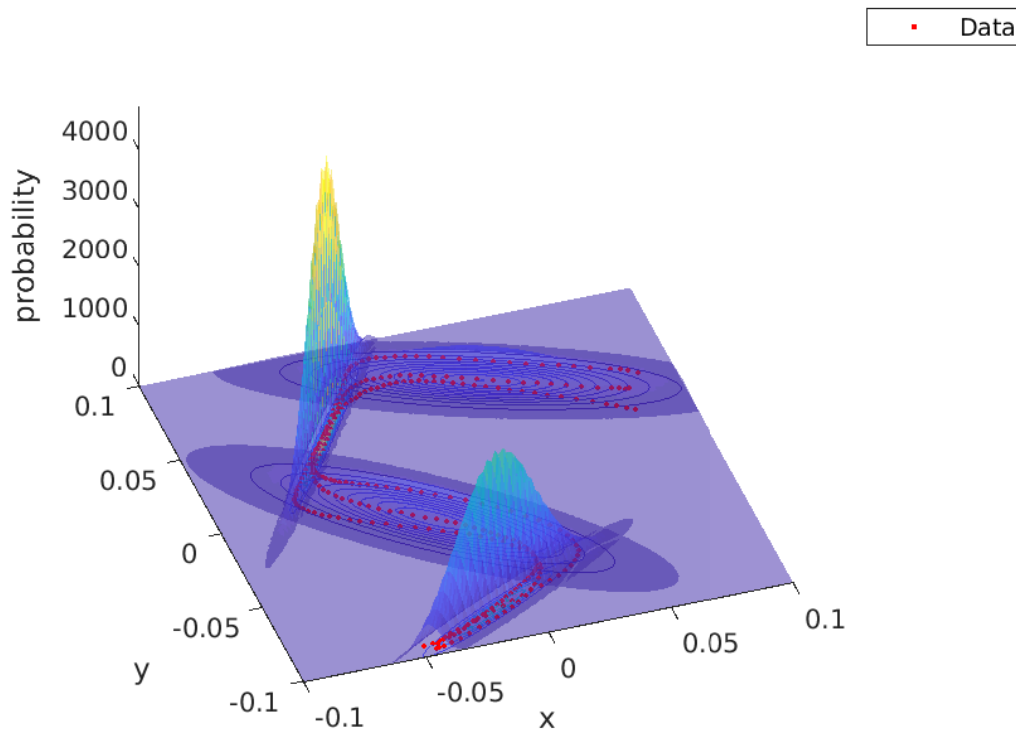


Figure 1: Resulting Gaussian Mixture Model.