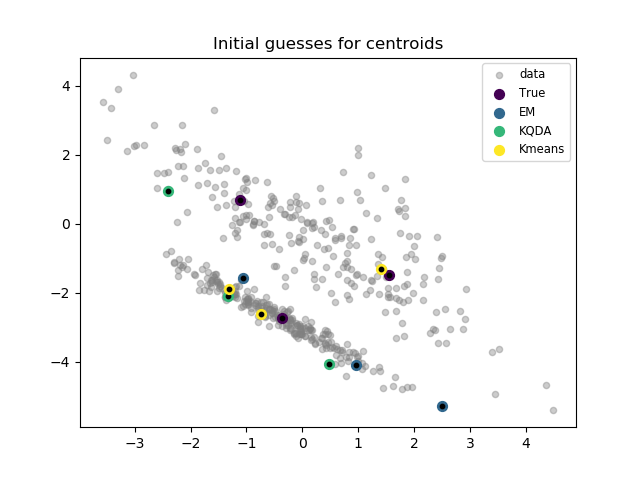
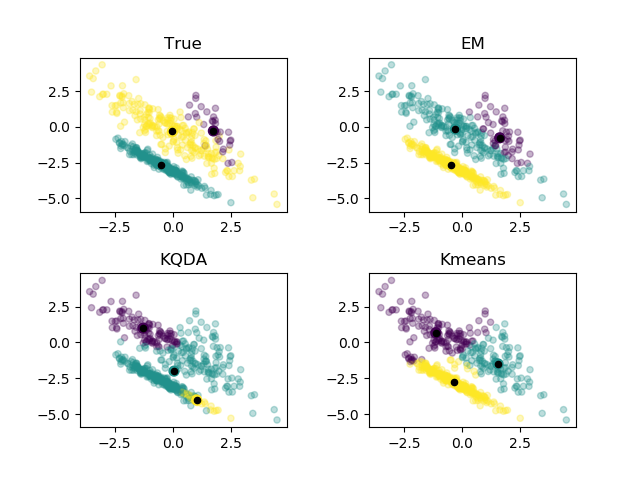
**5a**

The initial guesses are not good since the clusters are close to each other and with elongated shape. EM is able to capture the clusters but “hard” version EM cannot.

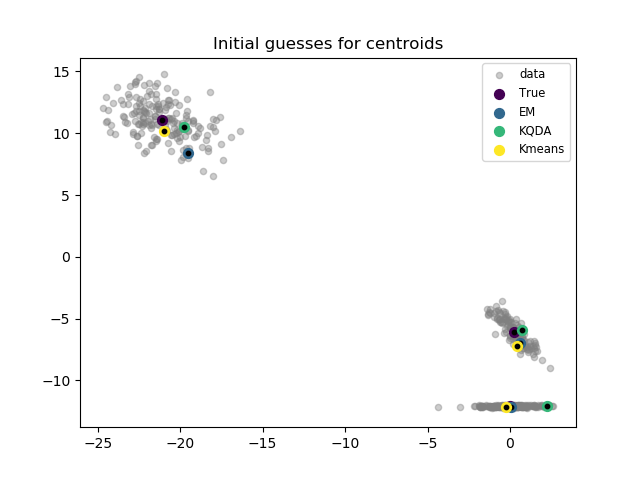
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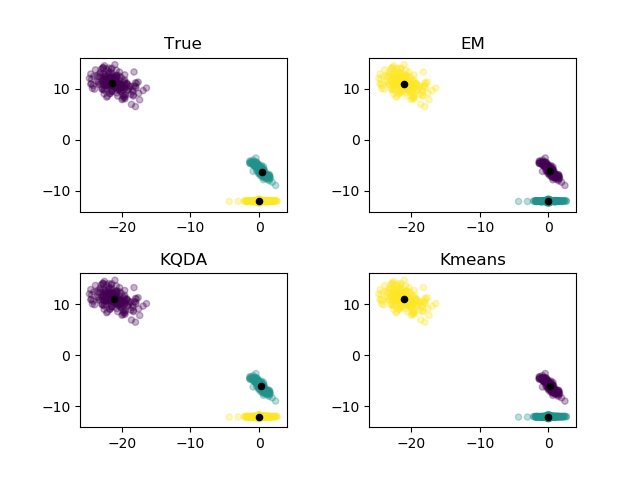
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**5b**

when clusters are well separated, initial guessed are good, since when sampling, points from each cluster have similar chances of being drawn. So it is very likely when we draw 3 initial random points from all points, we are drawing one from each cluster.

In this case, all algorithm works pretty well.

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