



FIGURE 4.2. Parzen-window estimates of a bimodal density.

requirements
large number
feature space
dimensionality
nonparametric

4.4 k_n -N

One of the problems is the choice of V_n . If $V_n = 1$, the cell will be empty, and if V_n is too large, the estimate will be over the cell.

One potential problem is the function of k_n and the number of samples. For a fixed cell about x , the number of samples specified by k_n is nV_n . If the density is not too good resolution, but it will still take

we want k_n/n will be of volume V_n size of the cell. It is clear from the above that we should supply a preliminary k_n as a function of n such that $V_n \approx V_1$ for arbitrary cell