SMAI Class 9

September 01, 2022

SVM revisited

Support Vectors: Data points closer to the boundary.

- Soft Margin SVM
    - Some outliners are there so boundary is not that clear. So we maintain a soft margin for such cases
- Transductive SVM
    - Many points with no annotation (class label).
    - We still use them to determine the density of the data.
    - Our boundary will exist at the low density region between the high density regions.
- Non-linear SVM
    - Kernelization

Kernel space

For kNN

- $\|x_i - x_j\|^2 = \langle x_i, x_i \rangle + \langle x_j, x_j \rangle - 2\langle x_i, x_j \rangle$

- kernel PCA