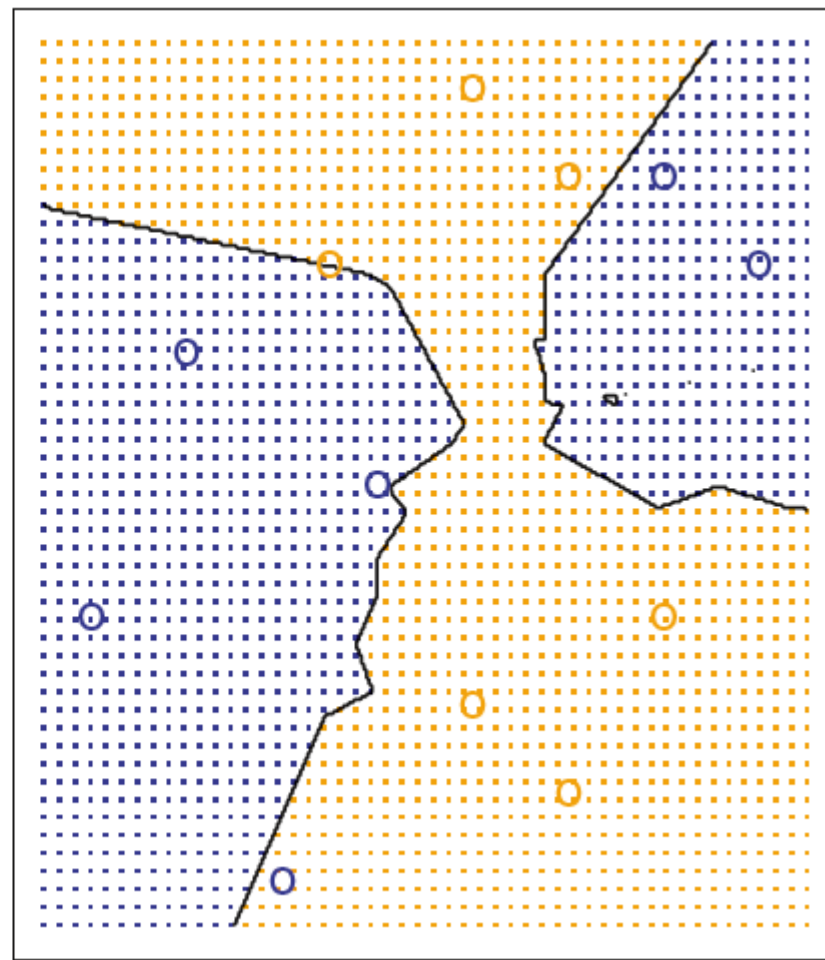
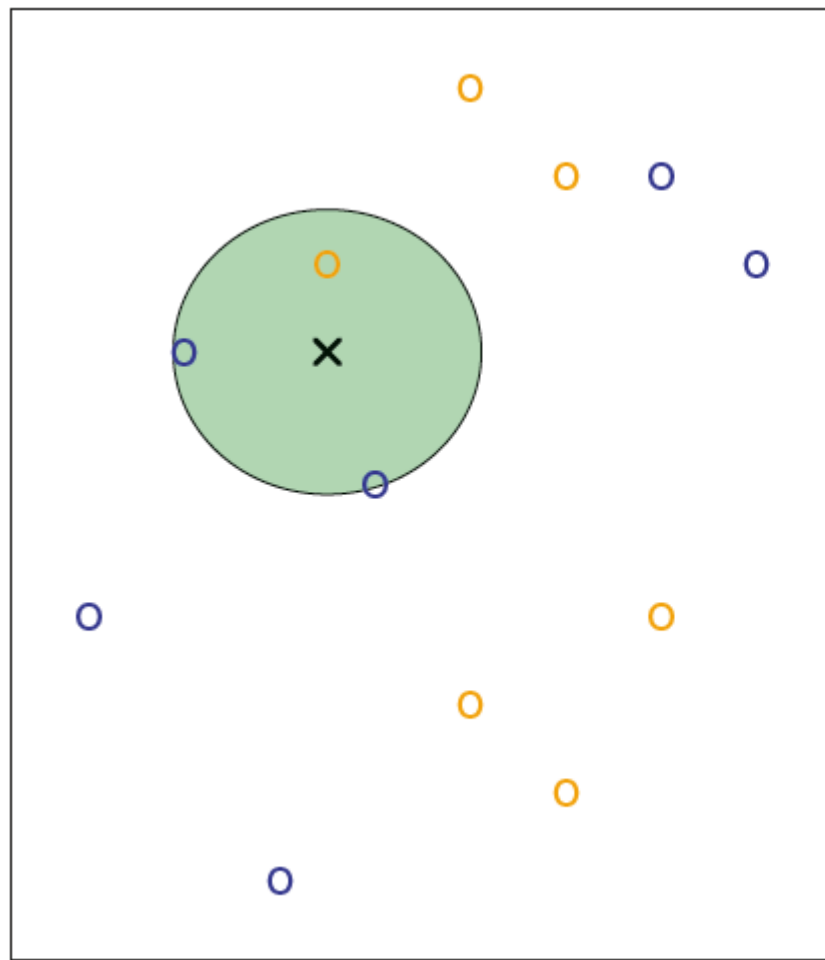




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K-Nearest Neighbors

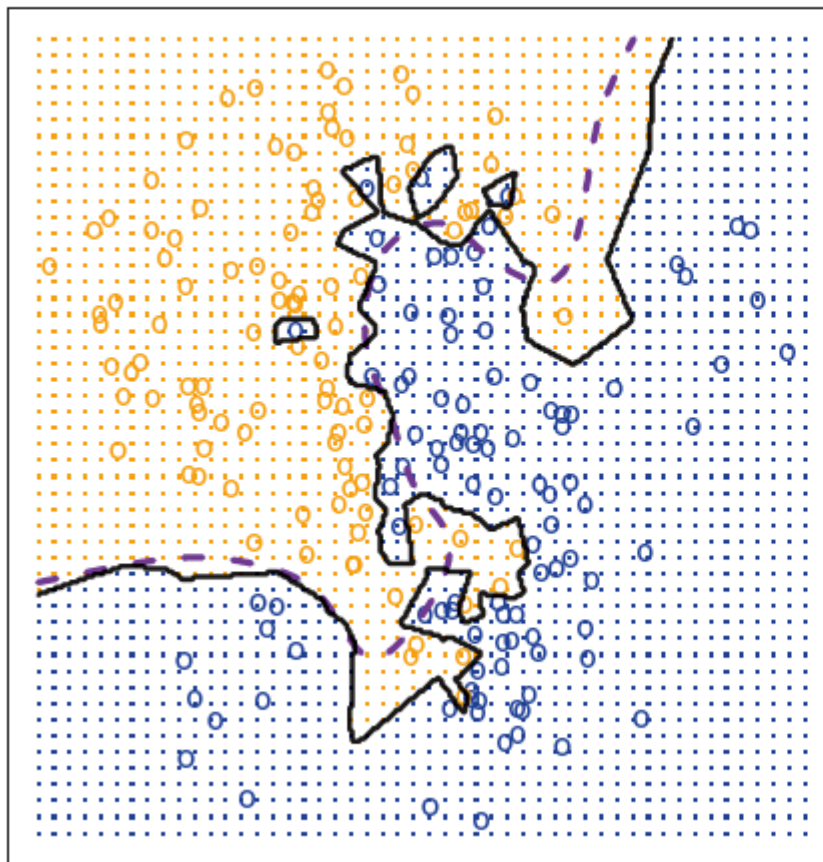
KNN



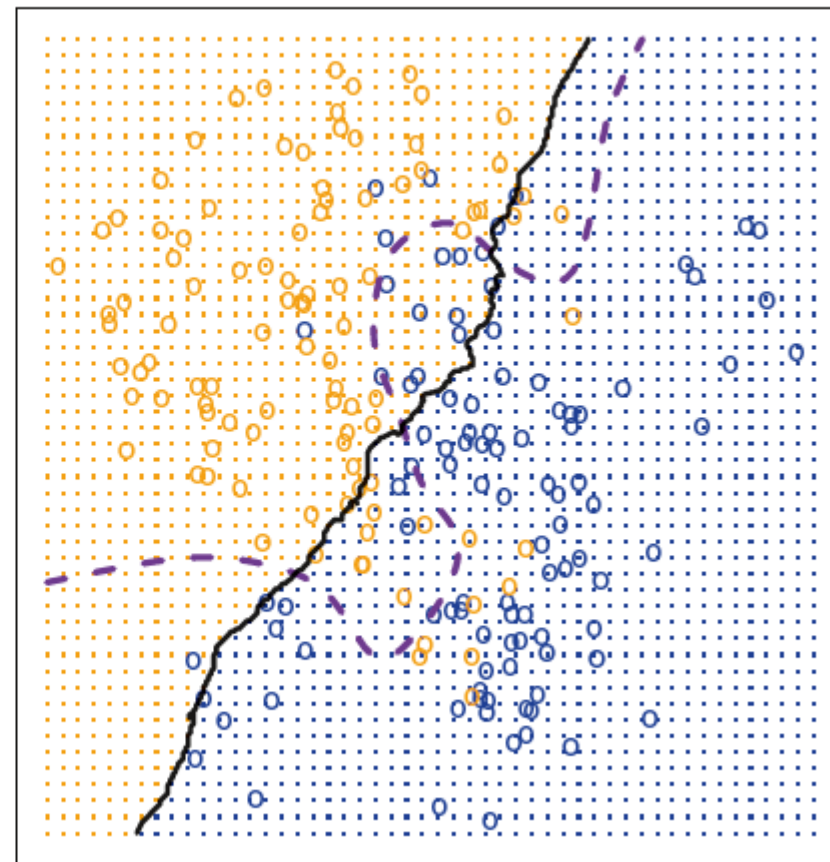
K-Nearest Neighbors

KNN

KNN: K=1



KNN: K=100



K-Nearest Neighbors

KNN

Notes

- In KNN distance between observations impacts the classifier
- Therefore, scale matters
- To handle the problem of scaling we standardize the data

$$\tilde{x}_{ij} = \frac{x_{ij}}{\sqrt{\frac{1}{n} \sum_{i=1}^n (x_{ij} - \bar{x}_j)^2}}$$