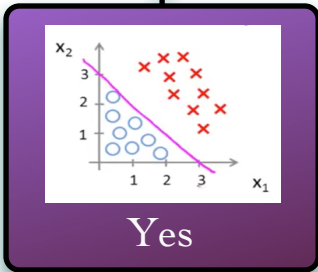
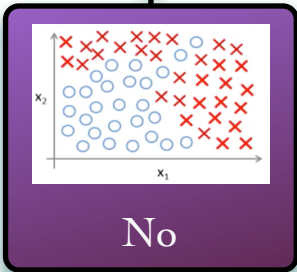


Is it easy to visualize data?

yes

no

Does a linear model (for regression) or a linear boundary (for classification) seems enough?



Use linear regression (for regression problem)
Use logistic regression (for classification problem)

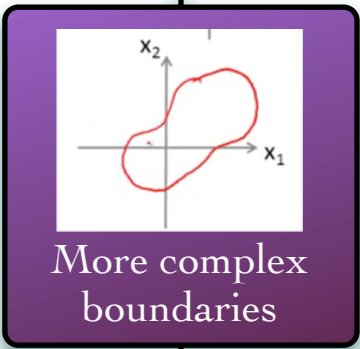
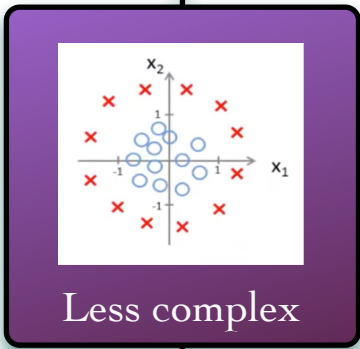
Is the number of original features are large

No

Yes

Do Feature Mapping

Use Neural Networks



Use a subset of 2nd or 3rd order feature mapping

$$x_1^2, x_2^2, x_3^2 \cdots x_N^2$$

Use 2nd or 3rd order feature mapping

$$x_1^2, x_1x_2, x_1x_3 \cdots x_1x_{100}, x_2^2, x_2x_3 \cdots x_3^2, x_3x_4 \cdots$$
$$x_1^3, x_1x_2x_3, x_1^2x_2, \cdots x_{11}x_{13}x_{17} \cdots$$