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# Terms/Formulas

## Input Data

Each data item is a d x 1 column vector



## Data Set



## Linear Model



We represent x and θ  as column vectors, that is, d ×1 arrays.





## Linear Classifier

**Define** the *positive* side of a hyperplane to be the half-space defined by





## Error / Loss



# Linear Classifiers

In linear classifiers we have to compute

1. Which side of the hyperplane does the point lie , i.e. is it positive or negative
2. What is the distance of the point from the linear classifier ( hyperplane)
3. Then we have to track how many of the points were classified properly