

1 Linear Regression WORKFLOW

Feed training data

Learning Algo

$h(x)$ funcⁿ

hypothesis funcⁿ

$n = \# \text{ features } (n=2)$

$m = \# \text{ training examples}$

$\text{ex} = (m=47)$

In general,

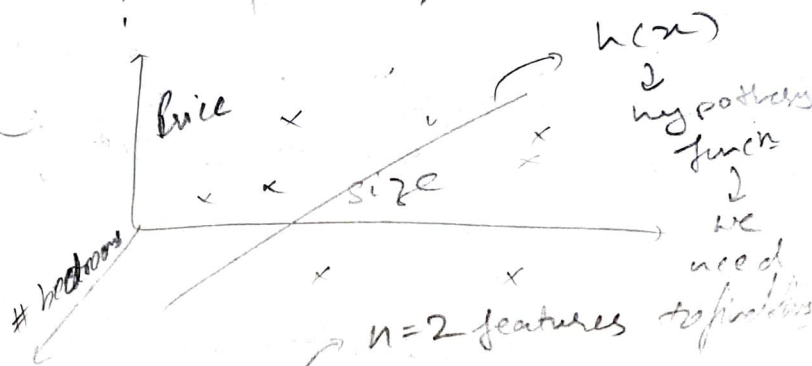
$$h(x) = \sum_{j=0}^n \theta_j x_j$$

where, $x_0 = 1$ ^{for n features}
 and for n features
 there are $n+1$ parameters

Also, $\theta = \begin{bmatrix} \theta_0 \\ \theta_1 \\ \theta_2 \end{bmatrix}$ & $x = \begin{bmatrix} x_0 \\ x_1 \\ x_2 \end{bmatrix}$

for n features
 there are $n+1$
 parameters(θ)

x_1 size (feet ²)	y Price (1000\$)	x_2 # bedrooms
2104	400	3
1600	330	3
2400	369	3
1416	232	2
3000	540	4
\vdots	\vdots	\vdots



$$h(x) = \theta_0 + \theta_1 x_1 + \theta_2 x_2$$

$\theta_0, \theta_1, \theta_2 \Rightarrow 3$ parameters (or, weights)

$x_1, x_2, \dots \Rightarrow$ inputs (or, features)

$x_1 = \text{size (in feet}^2\text{)}$

$x_2 = \# \text{ bedrooms}$