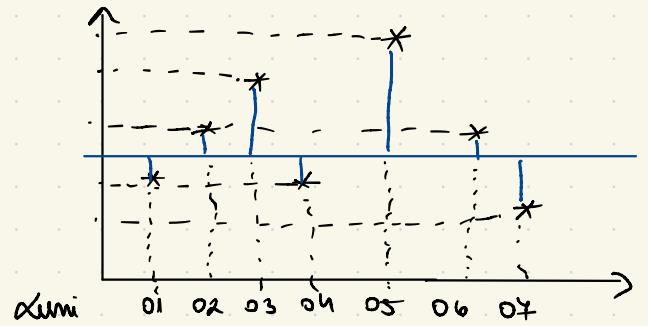


Curs 1 - 28 feb 2024

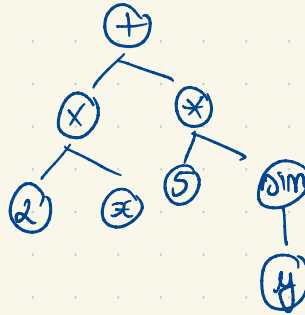
$$X = (x_1, x_2, \dots, x_n)$$

$$\bar{X} = \frac{\sum_{i=1}^n x_i}{n} \quad \sigma = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{X})^2}{n-1}}$$



Curs 2 - 6 mart. 2024

$$2x + 5 \times \sin(y)$$



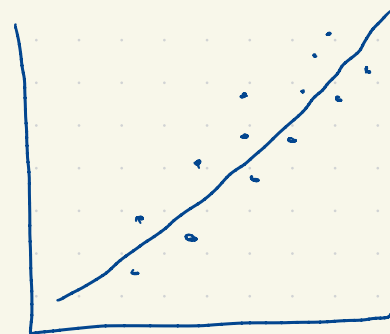
Curs 3 - 13 mart 2024

$$f(\beta, x) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots$$

$$\beta_i' = \beta_i - \eta \cdot \text{error} \cdot x$$

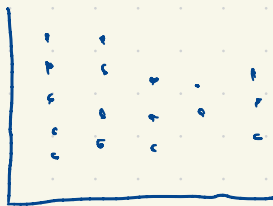
Proba regresie \rightarrow de clasificare

$f \in \{a, b\} \rightarrow \text{label 1, label 2}$



dacă s-a apropiat de diag, ne apropiem de concluzie

\hookrightarrow met. pătrăteilor mici



nu e bună concluzia

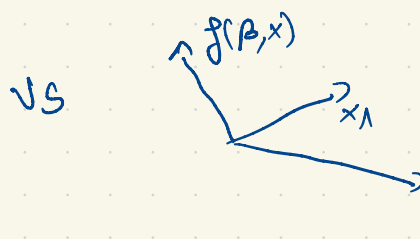
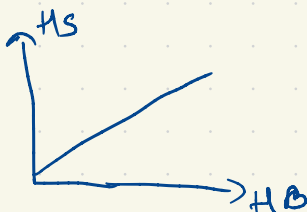
(prediction trainin en $>$
ex: 369, —)

$x_1 \rightarrow$ după
ex: vânt, temperatură
 \downarrow
 x_1 \downarrow
 x_2

$$\rightarrow f(x, \beta) = \beta_0 + \beta_1 x_1 + \beta_2 x_2$$

+ trebuie să aflăm β

va fi un spațiu grafic

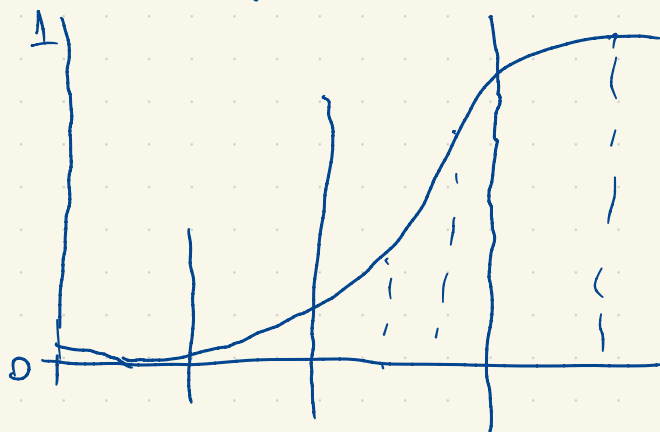


Bike	β_0	β_1	β_2
	1	vânt	temperatură
3	1	2	10
5	1	0.5	20
7	1	0.5	30
1	1	5	2

↓
se adăugăm noi

← statistici privind m. biciclete
în funcție de vânt, temp

Proba de clasificare



$$\Delta = |f(x_1) - f(x_2)|$$

$$\Delta' = |f(x_3) - f(x_4)|$$

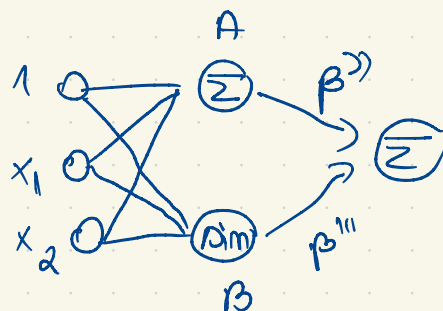
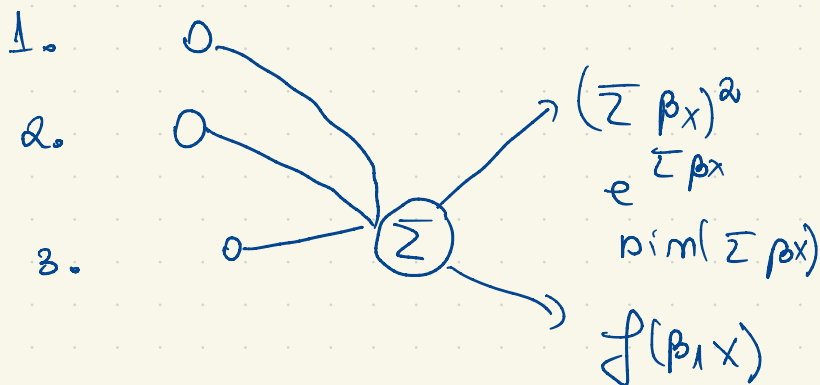
$$\Delta > \Delta'$$

Algoritm cu suport vectorial

- culoare cel mai mare \Rightarrow regresia (clasificarea) cea mai bună

Rețea neuronală

$$f(\beta, x) = \beta_0 + \beta_1 x_1 + \beta_2 x_2$$



in A: $1, x_1, x_2$

in B: $1, x_1, x_2$

in c: out A, out B

out A: $\beta_0 + \beta_1 x_1 + \beta_2 x_2$

out B: $\dim(\beta_0 + \beta_1 x_1 + \beta_2 x_2)$

out c: $\beta^v \cdot \text{out A} + \beta^w \cdot \text{out B}$

$$f(\beta, x) = \beta^v (\beta_0 + \beta_1 x_1 + \beta_2 x_2) + \beta^w \cdot \dim(\beta_0 + \beta_1 x_1 + \beta_2 x_2)$$

Curs 5 27 mart.

