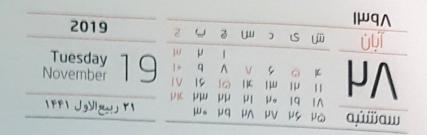
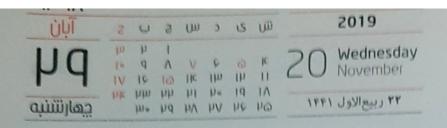


*
$$\frac{\partial f}{\partial \omega_0} = -Y \sum_{i=1}^{N} (y^i - \omega^T x^i)$$
 $\frac{\partial f}{\partial \omega_0} = -Y \sum_{i=1}^{N} (y^i - \omega^T x^i)(x^i)$

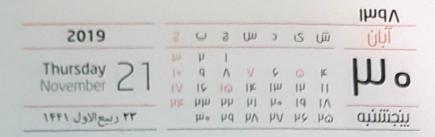
$$\frac{\partial f}{\partial w_{r}} = -t \sum_{i \neq j} (y' - w' x')(x'_{r}) \qquad \frac{\partial f}{\partial w_{r}} = -t \sum_{i \neq j} (y' - w' x')(x'_{j})^{t}$$



Probabilistic modeling .



Prior:
$$P(w;\alpha) = N(o, \alpha^{-1})$$
 $P(w) = \prod_{i=0}^{N} P(w;\alpha) = \prod_{i=1}^{N} N(w;\alpha^{-1})$
 $P(D|w) = \prod_{i=1}^{N} P(t;\alpha;w)$
 $P(w|D) = P(D|w) P(w) = \sum_{i=1}^{N} P(D|w) - l_n P(w)$
 $P(D) = arg min - \sum_{i=1}^{N} l_n N(t_n|x_nw_n) - \sum_{i=0}^{N} l_n P(w;\alpha^{-1}) = arg min - \sum_{i=1}^{N} l_n N(t_n|x_nw_n) - \sum_{i=0}^{N} l_n P(w;\alpha^{-1}) = arg min - \sum_{i=1}^{N} l_n N(t_n-y_n(x_nw_n)) + \sum_{i=0}^{N} l_n N(t_n-y_n(x_nw_n)) + \sum_{$



* p(w/0)= P(D/w) P(w) P(w), L(o, a'I)

P(D)

Tra exp(-lwi-ol)

(Ya)-t)

wmp = arg max (1 og P(D|w) + 1 og P(w)) = arg max (N log (B)

- B 2 (y(xi,u) - t') + Nlog tra - Vra 2 |wi|) 1"

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= arg min (\(\sum (t'-y(\(\alpha',\w)\)) + \(\sum |w|\)) \\ \(\text{bil} \) \\ \(\text{bil} \)

LSE

lasso - regularization term 14

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