Assignment 3

Question 1

$J(w) = arg\ min_w(Y - XW)^2 + \lambda||W||_2^2$

Part 1

λ = 0

Answer

For $\lambda = 0$, the L2 norm term has no effect and thus the result goes back to classical least square coefficients thus giving the result as MLE.

Ans : MLE

Part 2

$\lambda = \infty$

Answer

For $\lambda = \infty$, the cost function $\mathcal{J}$ goes to ∞, thus making the terms collapse and thus giving result as 0.

Ans : 0

Solution

2) MLE, 0