

Based on the eigenvalues of the Hessian, determine the convexity of the linear regression cost function $J(w_0, w_1) = \frac{1}{2m} \sum_{i=1}^m (w_0 + w_1 \mathbf{x}^{(i)} - y_i)^2$. Show your work.

Assumptions

- $m = 1$
- 1-D dataset