

Numerical Optimization Assignment

1. Calculate the gradient for the function $f(x, y) = x^3 - 2x^2y + 4y^2$ at (1,1)

2. What is the function called?

$$h_{\theta}(x) = \theta_0 + \theta_1 x$$

- a) Hypothesis.
- b) Cost function.
- c) Evaluation metric.

3. What does the function represent?

$$h_{\theta}(x) = \theta_0 + \theta_1 x$$

- a) Multivariate linear regression.
- b) Single variable linear regression.
- c) Logistic regression.

4. Is vector norm related to the cost function (True/false).

Explain why in brief.