

# Problem Set 3 Report

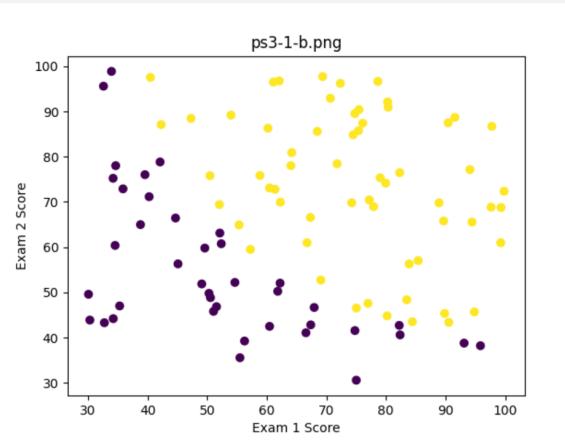
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## Problem 1: Logistic Regression

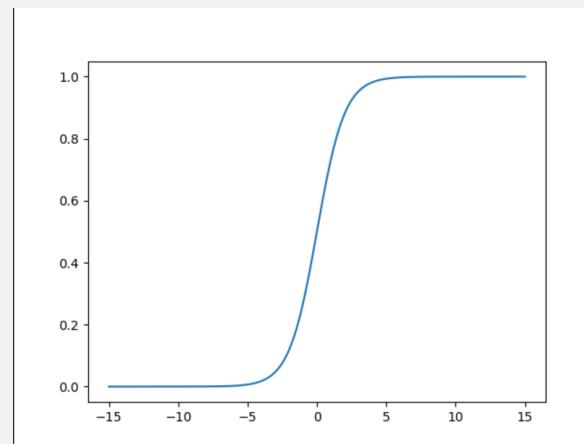
(a) Text Output: X Shape: (100, 3) y shape: (100, 1)

(b) ps3-1-b.png



(c) In code

(d) ps3-1-c.png

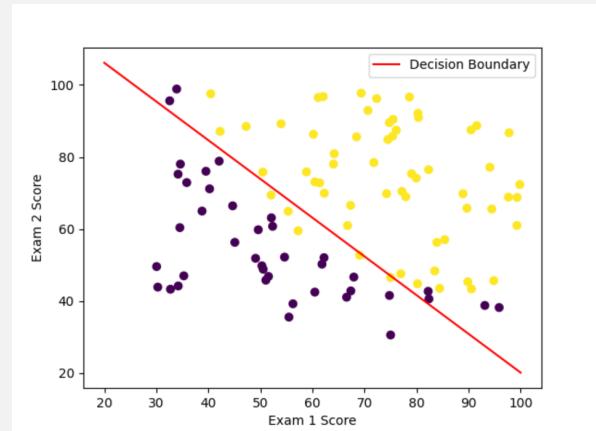


The output value reaches 0.1 at around -2.5

(e) Text Output: Cost: 1.7377719108435898

(f) Text Output : Optimized Theta: [-24.02037464 0.20228105 0.18818003] Optimized Cost: 0.20740567584781625

(g) ps3-1-g.png



(h) Text output: Accuracy: 90.0 %

(i) Text output: Probability of Student Acceptance: 0.5689786002513203 Student Admitted

## Problem 2: Non-Linear Fitting

(a) Text Output: Theta = [ 2.19256106e+05 -7.75884747e+02 1.06170499e+01]

(b) ps3-2-b.png

