

Intro to ML  
PS3 Report

Name: Timothy Horrell  
ID: 4475990

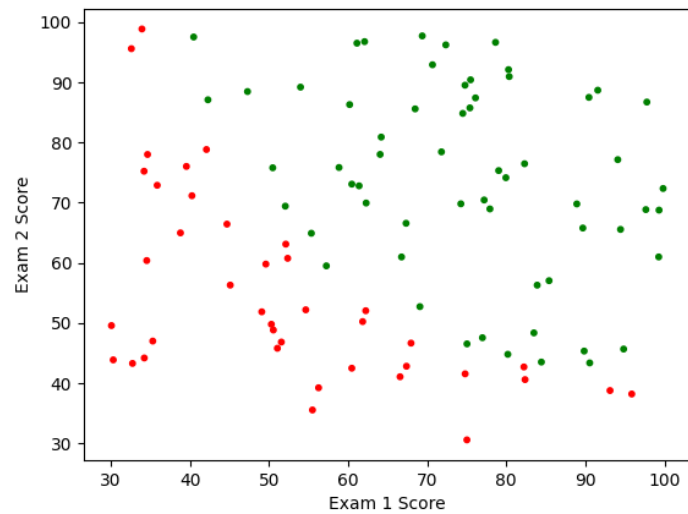
Questions:

1) .

a. Feature matrix size: (100, 3)

Label vector size: (100, 1)

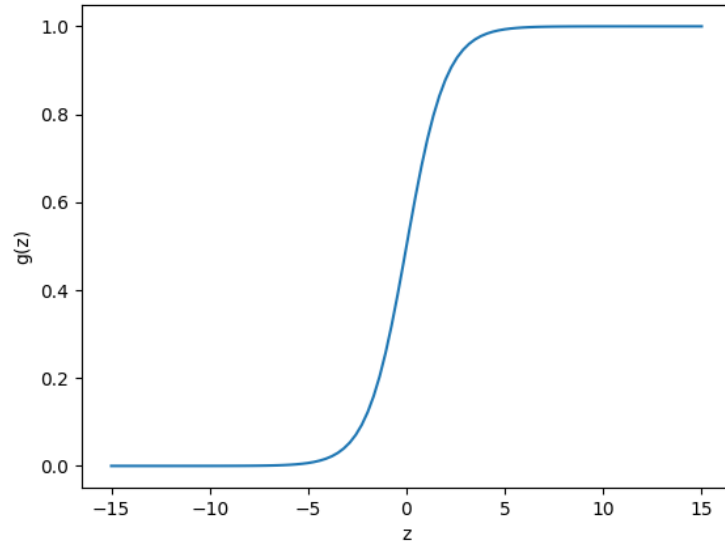
b. .



**ps3-1-b.png**

c. .

d. The figure appears to reach 0.9 at an input value of 2.



ps3-1-c.png

e. Cost J for the toy data set: 1.127

f. Optimal Theta Parameters:

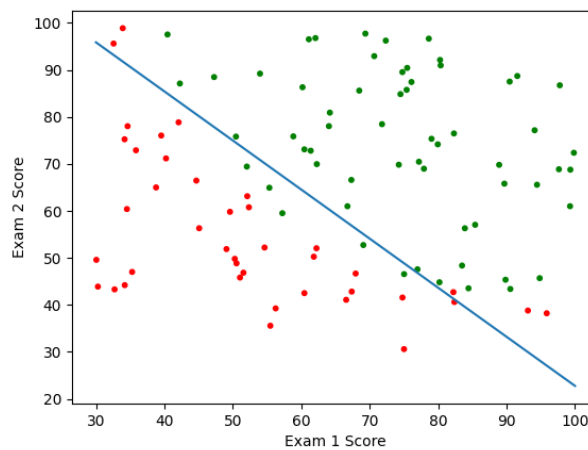
Theta<sub>0</sub>: -25.07

Theta<sub>1</sub>: 0.206

Theta<sub>2</sub>: 0.197

Cost at convergence: 0.207

g. .



ps3-1-f.png

h. Accuracy = 80%

i. Admission probability: 0.544

Admission Decision: yes

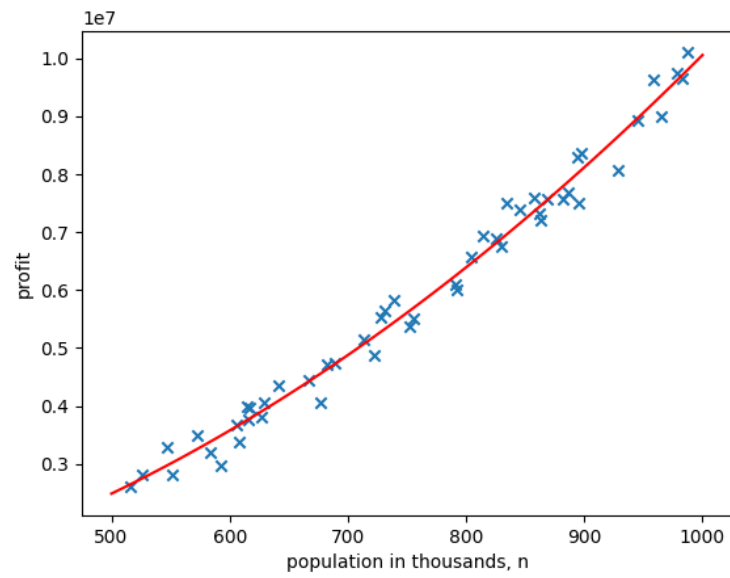
2) .

a. Theta<sub>0</sub>:  $2.19 \times 10^5$

Theta<sub>1</sub>:  $-7.76 \times 10^2$

Theta<sub>2</sub>:  $1.06 \times 10^1$

b. Image Output:



ps3-2-b.png