Homework Assignment 3
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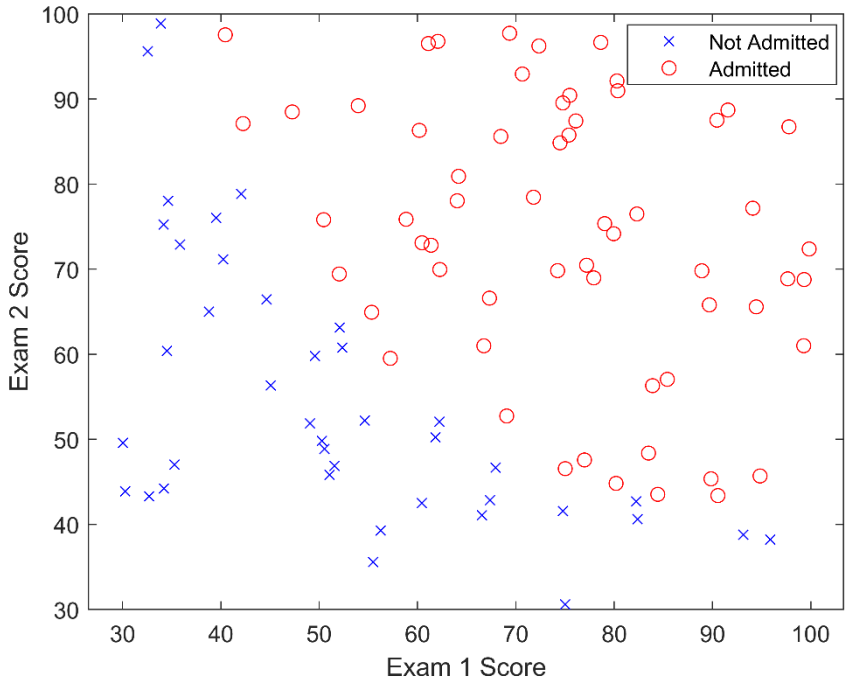
1- Logistic Regression

a. Size:
   X = 100x3
   Y = 100x1

b. Plot:

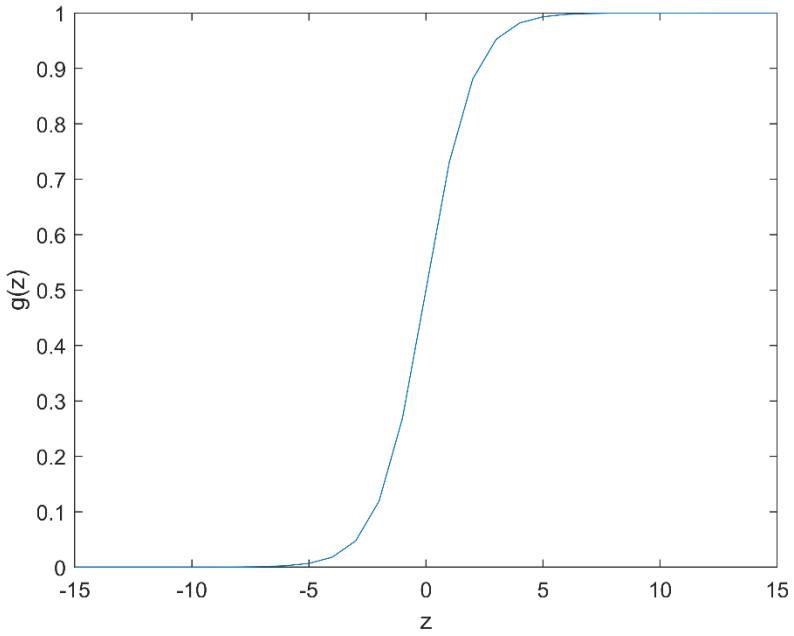
ps3-1-b.png



c. MATLAB Code

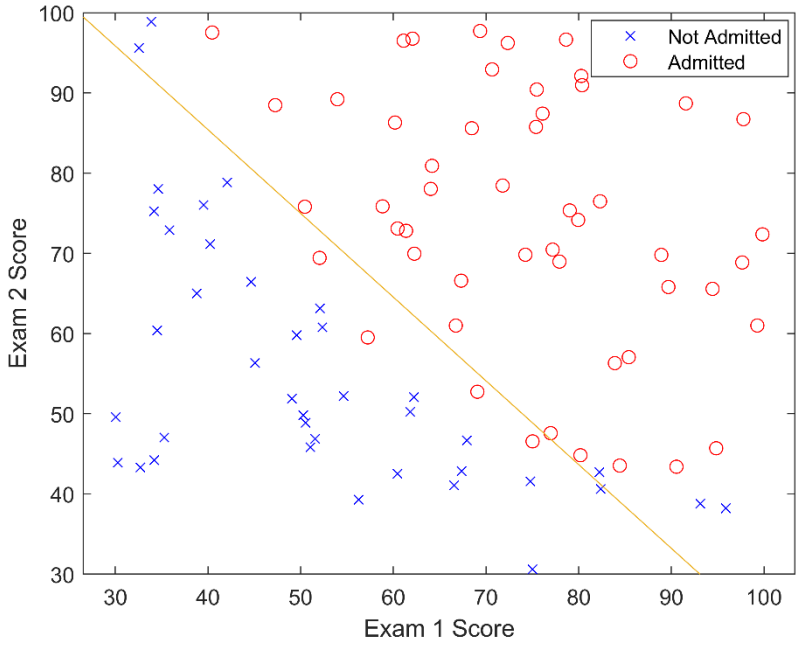
d. Based on the plot, the value of g(z) reaches .9 when z is about 2.3.

ps3-1-d.png



e. Cost: 1.1269
f. Theta = [-25.0756, 0.2059, 0.1971]' , Cost = 0.2069
g. Plot:

ps3-1-g.png



h. Accuracy = 0.9
i. The admission probability is 0.5443. Based on the probability, the admission decision should be admitted.
j. Bonus

2- Non-linear Fitting

a. Theta =

1.0e+05 *

2.1926
-0.0078
0.0001

b. Plot:

ps3-2-b.png