

Programming Exercise 8: Anomaly Detection and Recommender Systems

Machine Learning

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Question (1) (20 points)

Please estimate the mean and variance of dataset **ex8data1.mat**:

Mean = [14.1122
14.9977]

Variance = [1.8326
1.7097]

Question (2) (20 points)

Please compute the best F1 on cross validation set of dataset **ex8data1.mat**:

F1 = 0.875000

Question (3) (15 points)

Please compute the cost at loaded parameters(without regularization):

Cost = 22.224604

Question (4) (15 points)

Please compute the cost at loaded parameters($\lambda = 1.5$):

Cost = 31.344056

Question (5) (30 points)

Please list top 10 recommendations for the new user($\lambda = 10$):

#I rated some I don't like and some I may like, btw, these movies are too old#

Predicting rating 9.0 for movie Titanic (1997)

Predicting rating 8.7 for movie Shawshank Redemption, The (1994)

Predicting rating 8.7 for movie Star Wars (1977)

Predicting rating 8.6 for movie Good Will Hunting (1997)

Predicting rating 8.6 for movie Schindler's List (1993)

Predicting rating 8.4 for movie Usual Suspects, The (1995)

Predicting rating 8.4 for movie As Good As It Gets (1997)

Predicting rating 8.3 for movie Godfather, The (1972)

Predicting rating 8.3 for movie L.A. Confidential (1997)

Predicting rating 8.3 for movie Braveheart (1995)