9/17/2019 Recommender Systems | Coursera



Recommender Systems Graded Quiz • 10 min

**Due** Nov 18, 1:29 PM IST

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3 P

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**Density Estimation** 

**Building an Anomaly Detection System** 

**Multivariate Gaussian Distribution (Optional)** 

## Review

**Reading:** Lecture Slides 10 min

**Quiz:** Anomaly Detection 5 questions

**Predicting Movie Ratings** 

**Collaborative Filtering** 

**Low Rank Matrix Factorization** 

## Review

- **Reading:** Lecture Slides 10 min
- **Quiz:** Recommender Systems 5 questions
- **Programming Assignment:** Anomaly Detection and **Recommender Systems** 3h

**Congratulations! You passed!** TO PASS 80% or Higher 10 MIN

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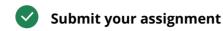
GRADE 100%

## **Recommender Systems**

## **Recommender Systems**

**LATEST SUBMISSION GRADE** 

100%



**DUE** Nov 18, 1:29 PM IST **ATTEMPTS** 3 every 8 hours

1. Suppose you run a bookstore, and have ratings (1 to 5 stars)

of books. Your collaborative filtering algorithm has learned

a parameter vector  $\theta^{ss}$  for use j, and a feature

vector  $x^{(i)}$  for each book. You would like to compute the

"training error", meaning the average squared error of your

system's predictions on all the ratings that you have gotten

from your users. Which of these are correct ways of doing so (check all that apply)?

For this problem, let m be the total number of ratings you

have gotten from your users. (Another way of saying this is

that  $m = \sum_{i=1}^{n_m} \sum_{j=1}^{n_u} r(i,j)$ ). [Hint: Two of the four options below are correct.]

Correct

In which of the following situations will a collaborative filtering system be the most appropriate learning algorithm (compared to linear or logistic regression)?

1/1 point

1/1 point

Grade

100%

✓ Correct

3. You run a movie empire, and want to build a movie recommendation system based on collaborative filtering. There were three popular review websites (which we'll call A, B and C) which users to go to rate movies, and you have just acquired all three companies that run these websites. You'd like to merge the three companies' datasets together to build a single/unified system. On website A, users rank a movie as having 1 through 5 stars. On website B, users rank on a scale of 1 - 10, and decimal values (e.g., 7.5) are allowed. On website C, the ratings are from 1 to 100. You also have enough information to identify users/movies on one website with users/movies on a different website. Which of the following statements is true?

1/1 point

Correct

4. Which of the following are true of collaborative filtering systems? Check all that apply.

1/1 point

Correct

5. Suppose you have two matrices A and B, where A is 5x3 and B is 3x5. Their product is C=AB, a 5x5 matrix. Furthermore, you have a 5x5 matrix  $\it R$  where every entry is 0 or 1. You want to find the sum of all elements C(i,j) for which the corresponding R(i,j) is 1, and ignore all elements C(i,j)where R(i,j)=0. One way to do so is the following code:

1/1 point

```
C = A * B;
total = 0;
for i = 1:5
  for j = 1:5
    if (R(i,j) == 1)
      total = total + C(i,j);
    end
  end
```

Which of the following pieces of Octave code will also correctly compute this total? Check all that apply. Assume all options are in code.

Correct