

ColumbiaX: CSMM.102x Machine Learning

Help



- Machine Learning Course: Getting Started
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Lecture 17 Matrix Factorization, Collaborative Filtering for Recommendation

Lecture 18 Topic Modeling, Nonnegative Matrix Factorization

Week 9 Quiz

Quiz due Apr 11, 2017 05:00 IST

Week 9 Project: Clustering

Project due Apr 11, 2017 05:00 IST Week 9 > Week 9 Quiz > Week 9 Quiz

Week 9 Quiz

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Checkboxes

0/1 point (graded)

Which of the following are problems that are naturally addressed by collaborative filtering?

- recommending movies
- recommending a political policy
- recommending music
- recommending restaurants

X

Submit

You have used 1 of 1 attempt

Incorrect (0/1 point)

Multiple Choice

1/1 point (graded)

A content filter ...

- uses known information about the products and users to make recommendations.
- uses previous user inputs/behaviors to make future recommendations.

Submit

You have used 1 of 1 attempt

Week 9 Discussion Questions

Multiple Choice

1/1 point (graded)
A collaborative filter . . .

- uses known information about the products and users to make recommendations.
- uses previous user inputs/behaviors to make future recommendations.

Submit

You have used 1 of 1 attempt

Multiple Choice

1/1 point (graded)

True or false: Content filtering and collaborative filtering are two distinct approaches that are not able to be combined in a single model.

TRUE

FALSE

Submit

You have used 1 of 1 attempt

Checkboxes

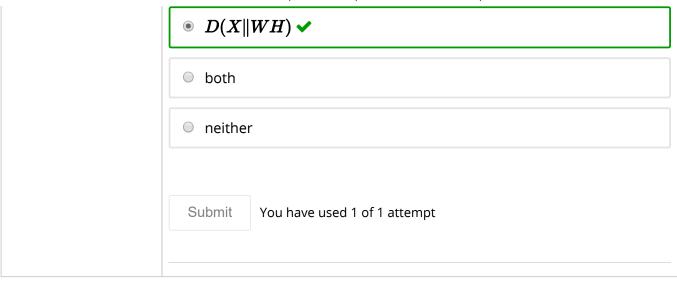
1/1 point (graded)

Check all true statements about collaborative filtering using matrix factorization.

- we anticipate it will work because we make a low rank assumption
- $\hfill \square$ all values in the matrix are needed before learning can begin
- probabilistic matrix factorization can be thought of as a set of connected ridge regression problems

☑ it can be latent sp	thought of as a way for embedding users and objects into a pace
Submit	You have used 1 of 1 attempt
● TRUE ✓	
FALSE	
Submit	You have used 1 of 1 attempt
Multiple 1/1 point (grade In LDA, the "to	
• distribut	cions on words that are semantically meaningful 🗸
o distribut	cions on how each document uses the themes available to it
• the colle	ection of word assignments to their respective themes
Submit	You have used 1 of 1 attempt
✓ Correct	(1/1 point)
Multiple 1/1 point (grade This week we	

based learning	" model?
O PMF	
■ NMF ✓	
o both	
o neither	
Submit	ou have used 1 of 1 attempt
Multiple (1/1 point (graded We made some following is tru	d) e loose connections between LDA and NMF. Which of the
O LDA and	NMF are both Bayesian models
	naximum likelihood model, while NMF can be thought of ully Bayesian model
	ully Bayesian model, while NMF can be thought of as a n likelihood model 🗸
o neither L	DA nor NMF have probabilistic interpretations
Submit	ou have used 1 of 1 attempt
Multiple (1/1 point (graded We discussed to Poisson model	d) wo version of NMF. Which one(s), if any, correspond to a
X-W	$\ H\ ^2$



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