

Quiz - Recommender Systems

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1. Recommending items based on **global popularity** can (*check all that apply*):

- ☐ provide personalization
 - ☐ capture context (e.g., time of day)
 - ☒ none of the above
-

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2. Recommending items using a **classification** approach can (*check all that apply*):

- ☒ provide personalization
 - ☒ capture context (e.g., time of day)
 - ☐ none of the above
-

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3. Recommending items using a **simple count based co-occurrence matrix** can (*check all that apply*):

- ☒ provide personalization
 - ☐ capture context (e.g., time of day)
 - ☐ none of the above
-

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4. Recommending items using **featurized matrix factorization** can (*check all that apply*):

- ☒ provide personalization
- ☒ capture context (e.g., time of day)
- ☐ none of the above

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5. Normalizing co-occurrence matrices is used primarily to account for:

- ☐ people who purchased many items
- ☒ items purchased by many people
- ☐ eliminating rare products
- ☐ none of the above

1
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6. A store has 3 customers and 3 products. Below are the learned feature vectors for each user and product. Based on this estimated model, which product would you recommend most highly to *User #2*?

User ID	Feature vector
1	(1.73, 0.01, 5.22)
2	(0.03, 4.41, 2.05)
3	(1.13, 0.89, 3.76)

Product ID	Feature vector
1	(3.29, 3.44, 3.67)
2	(0.82, 9.71, 3.88)
3	(8.34, 1.72, 0.02)

- ☐ Product #1
- ☒ Product #2
- ☐ Product #3

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7. For the liked and recommended items displayed below, calculate the **recall** and round to 2 decimal points. (As in the lesson, green squares indicate recommended items, magenta squares are liked items. Items not recommended are grayed out for clarity.) Note: enter your answer in American decimal format (e.g. enter 0.98, not 0,98)



0.33

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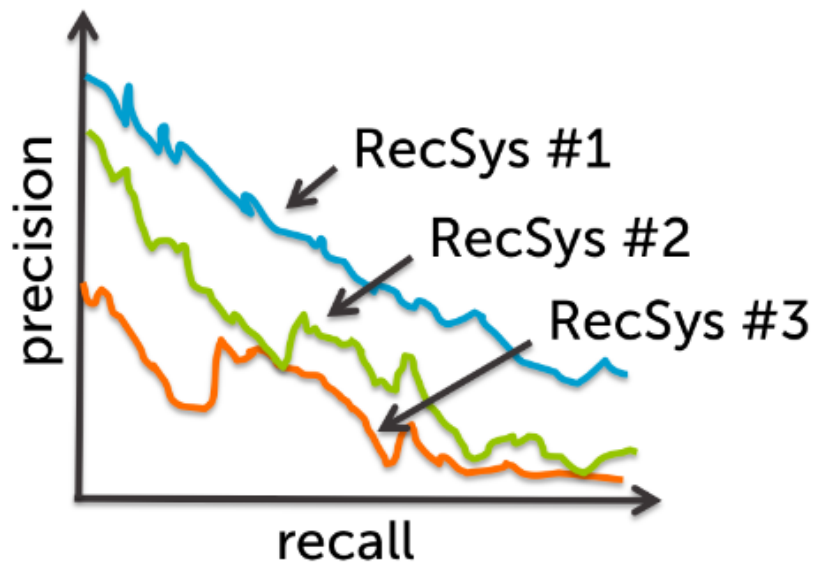
8. For the liked and recommended items displayed below, calculate the **precision** and round to 2 decimal points. (As in the lesson, green squares indicate recommended items, magenta squares are liked items. Items not recommended are grayed out for clarity.) Note: enter your answer in American decimal format (e.g. enter 0.98, not 0,98)



0.25

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9. Based on the precision-recall curves in the figure below, which recommender would you use?



- ☒ RecSys #1
- ☐ RecSys #2
- ☐ RecSys #3

Assignment - Recommending Songs

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1. Which of the artists below have had the most unique users listening to their songs?

- ☐ Kanye West
 - ☐ Foo Fighters
 - ☒ Taylor Swift
 - ☐ Lady GaGa
-

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2. Which of the artists below is the most popular artist, the one with highest total listen_count, in the data set?

- ☐ Taylor Swift
 - ☒ Kings of Leon
 - ☐ Coldplay
 - ☐ Lady GaGa
-

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3. Which of the artists below is the least popular artist, the one with smallest total listen_count, in the data set?

- ☒ William Tabbert
- ☐ Velvet Underground & Nico
- ☐ Kanye West
- ☐ The Cool Kids