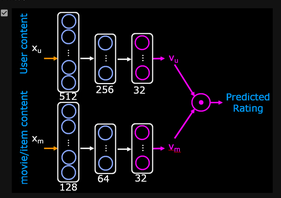
The two movies are similar to each other and will be liked by similar users.

Correct
Similar movies generate similar v_m's.

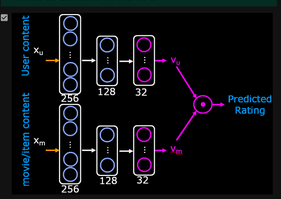
3. Which of the following neural network configurations are valid for a content based filtering application? Please note carefully the dimensions of the neural network indicated in the diagram. Check all the options that apply:

1 / 1 point



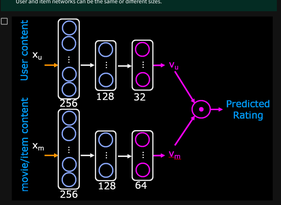
The user and the item networks have different architectures

Correct
User and item networks can be the same or different sizes.

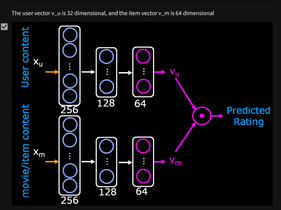


Both the user and the item networks have the same architecture

Correct
User and item networks can be the same or different sizes.



The user vector v_u is 32 dimensional, and the item vector v_m is 64 dimensional



The user and item networks have 64 dimensional v_u and v_m vector respectively

Correct
Feature vectors can be any size so long as v_u and v_m are the same size.

4. You have built a recommendation system to retrieve musical pieces from a large database of music, and have an algorithm that uses separate retrieval and ranking steps. If you modify the algorithm to add more musical pieces to the retrieved list (i.e., the retrieval step returns more items), which of these are likely to happen? Check all that apply.

1 / 1 point

The system's response time might increase (i.e., users have to wait longer to get recommendations)

Correct
A larger retrieval list may take longer to process which may increase response time.

The quality of recommendations made to users should stay the same or improve.

Correct
A larger retrieval list gives the ranking system more options to choose from which should maintain or improve recommendations.

The quality of recommendations made to users should stay the same or worsen.

The system's response time might decrease (i.e., users get recommendations more quickly)

5. To speed up the response time of your recommendation system, you can pre-compute the vectors v_m for all the items you might recommend. This can be done even before a user logs in to your website and even before you know the x_u or v_u vector. True/False?

1 / 1 point

True

False

Correct
The output of the item/movie neural network, v_m, is not dependent on the user network when making predictions. Precomputing the results speeds up the prediction process.