for one or more determinations. These latent representations may be used to decrease processing loads and increase the scalability.

[012] In some examples, methods and systems for providing recommendations based on user-supplied criteria using machine learning models are described. For example, the system may receive a user preference for content recommendations from a user. The system may retrieve a user profile for the user. The system may compare the user preference to the user profile to determine a criterion for content recommendations for the user. The system may receive a content attribute for content provided by a content provider. The system may match the criterion to the content attribute. The system may, in response to matching the criterion to the content attribute, generate for display a recommendation to the user for the content.

[012a] In one aspect, the present disclosure provides a system of providing recommendations based on user-supplied criteria using machine learning models, the system comprising: memory; and non-transitory computer-readable memory comprising instructions that cause a processor to perform operations comprising: receiving a user preference for content recommendations from a user; retrieving a user profile for the user; comparing the user preference to the user profile to determine a criterion for content recommendations for the user by generating a first feature input for a first machine learning model based on the user preference and the user profile and inputting the first feature input into the first machine learning model to receive the criterion, wherein the first machine learning model comprises a first content-based filtering component and a first collaborative filtering component; receiving a content attribute for content provided by a content provider; retrieving a content provider profile for the content provider; comparing the content attribute to the content provider profile to determine a normalized content attribute for content recommendations for the content provider by generating a second feature input for a second machine learning model based on the content attribute and the content provider profile and inputting the second feature input into the second machine learning model to receive the normalized content attribute, wherein the second machine learning model comprises a second content-based filtering component and a second collaborative filtering component; matching the criterion to the normalized content attribute; and in response to matching the criterion to the normalized content attribute, generating for display a recommendation to the user for the content.

[012b] In a second aspect, the present disclosure provides a method of providing recommendations based on user-supplied criteria, the method comprising:

receiving, using control circuitry, a user preference for content recommendations from a user;

retrieving, using the control circuitry, a user profile for the user;

comparing, using the control circuitry, the user preference to the user profile to determine a criterion for content recommendations for the user, wherein comparing the user preference to the user profile to determine the criterion for content recommendations for the user, further comprises:

generating a first feature input for a first machine learning model based on the user preference and the user profile; and

inputting the first feature input into the first machine learning model to receive the criterion, wherein the first machine learning model comprises a first content-based filtering component and a first collaborative filtering component;

receiving, using the control circuitry, a content attribute for content provided by a content provider;

retrieving a content provider profile for the content provider;

comparing the content attribute to the content provider profile to determine a normalized content attribute for content recommendations for the content provider by:

generating a second feature input for a second machine learning model based on the content attribute and the content provider profile; and

inputting the second feature input into the second machine learning model to receive the normalized content attribute, wherein the second machine learning model comprises a second content-based filtering component and a second collaborative filtering component;

matching the criterion to the normalized content attribute; and

in response to matching the criterion to the normalized content attribute, generating for display a recommendation to the user for the content.

[012c] In a third aspect, the represent disclosure provides a non-transitory, computer-readable medium for providing recommendations based on user-supplied criteria comprising instructions embedded thereon that when executed by one or more processors causes operations comprising:

receiving a user preference for content recommendations from a user;

retrieving a user profile for the user;

comparing the user preference to the user profile to determine a criterion for content recommendations for the user, wherein comparing the user preference to the user profile to determine the criterion for content recommendations for the user, further comprises:

generating a first feature input for a first machine learning model based on the user preference and the user profile; and

inputting the first feature input into the first machine learning model to receive the criterion, wherein the first machine learning model comprises a first content-based filtering component and a first collaborative filtering component;

receiving a content attribute for content provided by a content provider;

retrieving a content provider profile for the content provider;

comparing the content attribute to the content provider profile to determine a normalized content attribute for content recommendations for the content provider by generating a second feature input for a second machine learning model based on the content attribute and the content provider profile and inputting the second feature input into the second machine learning model to receive the normalized content attribute, wherein the second machine learning model comprises a second content-based filtering component and a second collaborative filtering component;

matching the criterion to the normalized content attribute; and

in response to matching the criterion to the normalized content attribute, generating for display a recommendation to the user for the content.

[012d] In an example, the present disclosure provides a method of providing recommendations based on user-supplied criteria, the method comprising: receiving, using control circuitry, a user preference for content recommendations from a user; retrieving, using the control circuitry, a user profile for the user; comparing, using the control circuitry, the user preference to the user profile to determine a criterion for content recommendations for the user; receiving, using the control circuitry, a content attribute for content provided by a content provider; matching the criterion to the content attribute; and in response to matching the criterion to the content attribute, generating for display a recommendation to the user for the content.

[012e] In an example, the represent disclosure provides a non-transitory, computer-readable medium for providing recommendations based on user-supplied criteria comprising instructions embedded thereon that when executed by one or more processors causes operations comprising: receiving a user preference for content recommendations from a user; retrieving a user profile for

the user; comparing the user preference to the user profile to determine a criterion for content recommendations for the user; receiving a content attribute for content provided by a content provider; matching the criterion to the content attribute; and in response to matching the criterion to the content attribute, generating for display a recommendation to the user for the content.

[013] Various other aspects, features, and advantages of the disclosure will be apparent through the detailed description of the disclosure and the drawings attached hereto. It is also to be understood that both the foregoing general description and the following detailed description are examples and not restrictive of the scope of the disclosure. As used in the specification and in the claims, the singular forms of "a," "an," and "the" include plural referents unless the context clearly dictates otherwise. In addition, as used in the specification and the claims, the term "or" means "and/or" unless the context clearly dictates otherwise.

BRIEF DESCRIPTION OF THE DRAWINGS

[014] FIG. 1 shows an illustrative example of user interface for generating a plurality of recommendations, in accordance with one or more embodiments.

[015] FIG. 2 shows another illustrative example of user interface for generating a plurality of recommendations, in accordance with one or more embodiments.

[016] FIG. 3 shows a machine learning model architecture for matching user-supplied criteria to content, in accordance with one or more embodiments.

[017] FIG. 4 shows a system for matching user-supplied criteria to content, in accordance with one or more embodiments.

[018] FIG. 5 shows a flowchart for matching user-supplied criteria, in accordance with one or more embodiments.

[019] FIG. 6 shows a flowchart for selecting a machine learning model for matching user-supplied criteria, in accordance with one or more embodiments.