Technical Disclosure Commons

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Media suggestions based on face recognition

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ABSTRACT

To initiate or continue media playback on a device such as a smart speaker, the user needs to provide input, e.g., a voice command, touchscreen-based input, etc. This disclosure describes techniques to automatically recommend media content to users upon detecting the user's presence, e.g., using facial recognition techniques. With user permission, media consumption, e.g., music, radio shows, podcasts, television shows, online videos, etc. of a user is analyzed to determine usage patterns. User-specific media suggestions are determined based on the usage patterns. When it is detected that the user is near a media playback device, e.g., smart speaker, smart television, etc., the media suggestions are provided to the user to enable instant playback of the media. The techniques are implemented with user permission. Users are provided with options to turn off facial recognition and the provision of media suggestions.

KEYWORDS

- smart speaker

- smart display

- virtual assistant

- usage pattern

- media suggestion

- media playback

- content recommendation

- face recognition

BACKGROUND

Many users have media playback routines, e.g., play the weather bulletin before leaving for work, play podcasts while cooking dinner, play workout music at scheduled workout times, etc. Playback devices such as smartphones, smart speakers, televisions, etc. do not recognize such patterns. Instead, to initiate or continue playback, the user needs to provide explicit input, e.g., open a particular media app, navigate playlists, search for particular content, etc. which has high friction.

DESCRIPTION
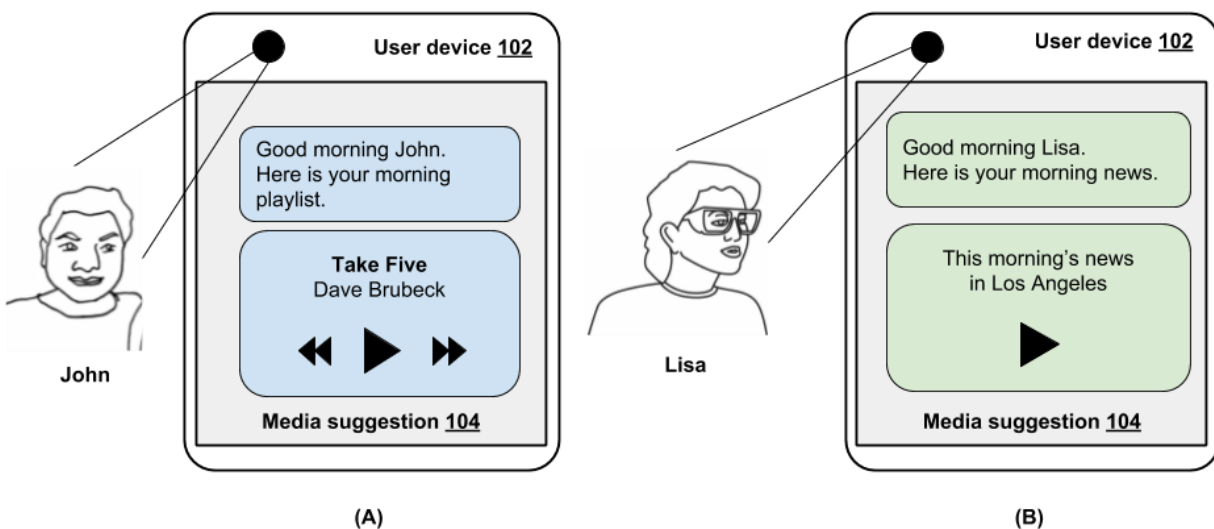
Fig. 1: Providing media suggestions based on detecting user presence

Fig. 1(A) and 1(B) illustrate an example of providing media suggestions based on detecting user presence, per techniques of this disclosure. With user permission, a user device (102) such as a smart speaker, smart display, smartphone, etc. equipped with a camera captures an image of a face present proximate to the device. Using facial matching techniques, the presence of a particular user is detected. For example, in Fig. 1(A), it is detected that the user John is present, while in Fig. 1(B) it is detected that the user Lisa is present.

Based on the detected user identity, the device retrieves media suggestions for the specific user. For example, the media suggestions are based on the user's prior usage patterns, and on other user-permitted factors such as time of the day, the user's location, user's interests, available content, etc. For example, the device can determine that the user John plays music in the morning, e.g., music in the genre of Jazz, while the user Lisa listens to the news. The device can make this determination locally, or can query a recommendation service.

If a media suggestion is available that meets a threshold, the suggestion is provided to the user. For example, in Fig. 1(A) the suggestion is a Jazz playlist, beginning with the song "Take Five" while in Fig. 1(B) the suggestion is to initiate playback of the morning's news in Los Angeles. If the contextual information indicates that the user paused playback of certain media, e.g., a podcast in their car, and has just entered the home, a suggestion can be provided to continue playback. Similarly, for content that has multiple episodes, e.g., podcasts, video shows, etc., the next episode can be identified and provided as a suggestion. Suggestions can also be based on user interests, e.g., particular sports teams, news topics, etc. Provision of suggestions in this manner can improve user satisfaction and increase usage of media playback devices. While the examples described herein relate to suggestions determined based on user habits, resumption of media playback, or occurrence of events, any type of triggering condition can be used to determine media suggestions.

The described techniques can be implemented in software such as virtual assistant applications, mobile operating systems, etc. and can provide media suggestions on devices such as smart displays, smartphones, smart speakers, home entertainment systems, etc. Alternative techniques to detect the user's presence, e.g., based on voice or proximity sensor can also be utilized. Further, instead of or in addition to user-specific suggestions, media that is currently

trending, can be provided as a suggestion. The described techniques are implemented with specific user permission. If the user denies or restricts permission to access their usage data, only such data are accessed as permitted by the user for the determination of media suggestions.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein may enable collection of user information (e.g., information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

This disclosure describes techniques to automatically recommend media content to users upon detecting the user's presence, e.g., using facial recognition techniques. With user permission, media consumption, e.g., music, radio shows, podcasts, television shows, online videos, etc. of a user is analyzed to determine usage patterns. User-specific media suggestions are determined based on the usage patterns. When it is detected that the user is near a media playback device, e.g., smart speaker, smart television, etc., the media suggestions are provided to the user to enable instant playback of the media. The techniques are implemented with user

permission. Users are provided with options to turn off facial recognition and the provision of media suggestions.