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Virtual assistant for planning and booking holiday trips

ABSTRACT

Booking and planning holidays is a time consuming activity that is performed multiple times by most users. This disclosure provides a virtual assistant that intelligently simplifies holiday planning and booking. A discovery and booking flow specifically designed for booking holidays is implemented to offer multiple options that the user can choose from at each step, or a limited set of complete plans are displayed based on user requirements determined based on user context, obtained with user permission.

KEYWORDS

- Virtual assistant
- Trip planning
- Holiday plan
- Travel booking

BACKGROUND

Booking and planning holidays (or other travel) is a time consuming activity since it involves many different factors that the user needs to decide on. For example, to book a holiday, a user needs to research location, time, travel, hotels, events, etc. and make bookings accordingly. Many users book multiple trips in a year which imposes a substantial cognitive burden. Further, with a large number of options of destinations, events, hotels, flights, etc. to choose from, a user may suffer from decision paralysis.

DESCRIPTION

This disclosure describes automated techniques, e.g., implemented by a virtual assistant, to provide guided flows and/or complete plans that make holiday planning and booking easier. Helping the user narrow down choices during the booking process can help users make decisions faster and easier.

User context data, e.g., past holidays, current calendar data, etc. are obtained with user permission. When such data is available, holiday recommendations are provided to the user based on the context. For example, if permitted by the user, existing calendar events, e.g., holiday dinners with family, are utilized to identify locations and dates that the user has already planned. As another example, if permitted, the user's prior holiday information is utilized to determine factors such as destination (e.g., the user typically takes ski vacations in January and foreign vacations in the summer), level of spending, airline preferences and/or frequent flier information, preferred modes of transportation, family size, etc.

The user is provided with options to choose user data that is used for such analysis and the type of analysis performed. Step-by-step guidance and/or complete holiday plans are provided to the user based on combining the context with other information such as ratings of hotels, important landmarks to see, etc. For example, the guidance and/or holiday plans can be generated using machine learning techniques.

If permitted by the user, travel, hotel, and events can be booked automatically, e.g., by the virtual assistant or other software that implements the described techniques. Alternatively, options for travel, hotel, events, etc. can be presented to the user as suggestions that the user can select to manually perform bookings. When presenting complete plans, a summary of the

proposed trip that includes a short description and pictures of the various trip options is provided to the user.

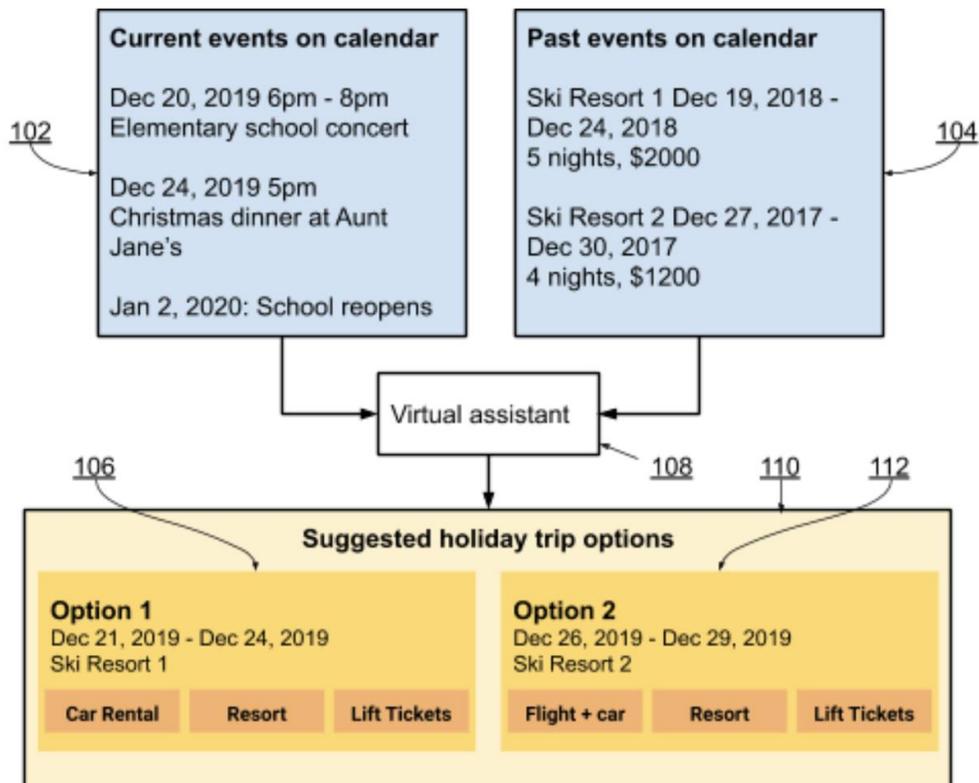


Fig. 1: Trip planning using a virtual assistant

Fig. 1 illustrates a virtual assistant (108) that enables a user to book a holiday trip. As illustrated in Fig. 1, in response to a user query to the virtual assistant (108) to plan a holiday trip, current events (102) and prior events (104) from a user's calendar are obtained, with user permission. As shown in Fig. 1, when the user initiates a query to plan a holiday trip, the virtual assistant obtains and analyzes the events to suggest holiday trip options (110).

For example, Option 1 (106) presents a suggestion for a trip to Ski Resort 1 (106) based in part on the user's upcoming calendar availability (no overlapping dates) and that the user booked Ski Resort 1 during a similar period in a prior calendar year. Similarly, the virtual

assistant presents Option 2, Ski Resort 2 (112) based in part on the user's upcoming calendar availability (no dates that clash) and that the user booked Ski Resort 2 during a similar period in a prior calendar year.

The user interface provided by the virtual assistant includes selectable elements that when selected display suggestions for various trip options such as travel, accommodation, and events. For example, as illustrated in Fig. 1, travel options include car rental and flights, accommodation options include resorts, and event options include lift tickets at the ski resort. Selecting the user interface elements enables the user to view details and can include a link to a booking service for these options.

While the foregoing description refers to holiday trip planning, the described techniques can be used for any kind of trip planning, e.g., business travel, group event, etc. The techniques can be implemented in a virtual assistant, in a travel planning tool, in a messaging application (e.g., using a chat bot), or other software, and can be provided on devices such as phones, tablets, laptops, smart displays, smart speakers, or any other suitable user device.

Further to the descriptions above, the user, is 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., a user's preferences; sensor data such as a camera feed, user's current location, ambient sound levels, etc.), and if the user is sent content or communications from a server. In addition, certain data is treated before it is stored or used, so that personally identifiable information is removed. For example, a user's identity is treated so that no personally identifiable information can be determined for the user; a user's geographic location is generalized where location information is obtained so that a particular location of a user cannot be determined. Thus, the user has control over whether and what information is

collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

This disclosure provides a virtual assistant that intelligently simplifies holiday planning and booking. A discovery and booking flow specifically designed for booking holidays is implemented to offer multiple options that the user can choose from at each step, or a limited set of complete plans are displayed based on user requirements determined based on user context, obtained with user permission.