Technical Disclosure Commons

Defensive Publications Series

September 04, 2019

Bot for order placement and pickup

N/A

Recommended Citation

Bot for order placement and pickup

ABSTRACT

Many establishments that serve food and drinks provide an option to place orders and have the items be packed for takeout. Customers can place such pickup orders in-person at the counter, via a drive-through, on the phone, online via the establishment's website, through third party apps and services that provide pickup and delivery features, etc. Once the order is placed the customer typically receives an estimated time when the order will be ready for pickup. However, these estimates are independent of relevant contextual information, such as the customer's current location. This disclosure describes techniques to support pickup orders various establishments via an automated interactive bot that uses voice and/or text-based chat interaction. With customer permission, relevant contextual information can be used to enhance the order placement interaction and order pickup experience. The described techniques can be implemented as a standalone system and/or integrated within existing systems or applications, such as maps, virtual assistants, search engines, websites, etc.

KEYWORDS

- Order placement
- Order pickup
- Drive through
- Location-based services
- Food ordering
- Virtual assistant
- Bot

BACKGROUND

Many establishments that serve food and drinks, such as restaurants, cafes, etc., provide options to place orders via a drive-through or allow customers to order at the counter and have the items be packed for takeout. Order placement and pickup is also supported by other merchants, e.g., retailers, repair shops, laundry shops, etc. Oftentimes, customers can also place such pickup orders on the phone or online via the establishment's web site. Alternatively, customers can order via third party apps and services that provide pickup and delivery features.

Order placement generally require the customer either to talk in-person or on the phone with an employee of the establishment or to interact with a website or app connected to the establishment that provides no direct contact with a human. Once an order is placed the customer typically receives an estimated time when the order will be ready for pickup. In case of in-person interactions, the employee provides the estimate while in case of online or app-based orders, the site or app displays an estimate of pickup and/or delivery times. However, these estimates are typically independent of relevant contextual information, such as the customer's current location.

DESCRIPTION

This disclosure describes techniques to support pickup orders at food and drink establishments (or other merchants) via an automated interactive bot. Customers that wish to place orders can interact with the bot via voice and/or text-based chat. In such a case, the customer can directly invoke the interaction with the bot. For instance, the bot can be activated by clicking a chat button within the establishment's website or app. Alternatively, customer interaction with the bot can begin in reaction to a prompt. For instance, an advertisement for the establishment on a site or within an app or the icon for the establishment within an electronic map can lead a customer to the bot.

A person looking for food or drink options typically looks for suitable establishments in a number of ways, such as searching on the web, navigating with online maps, checking relevant apps, asking a virtual assistant, etc. Information about the establishment encountered during the search can include the option to place an order for pickup. When the user decides the place an order for pickup, the ordering process can be handled by the bot described above.

The customer then interacts with the bot via text-based chat and/or voice to order the desired items for pickup. It may often be the case that the customer is already on the way to the establishment at the time of order placement. With customer permission, the customer's location can be used to enhance the order placement interaction with the bot. For instance, the customer's current location can be used to calculate and display the distance between the customer and the establishment. In addition, the customer can be shown additional relevant information such as estimated arrival time based on the mode of transportation. For example, real-time traffic information can be taken into account when estimating driving time needed to reach the establishment.

With customer permission, contextual factors such as distance and time, can be taken into account to adjust the ordering experience provided by the bot. For instance, depending on the customer's current location, the bot can adjust the level of verbosity of the interactions and explanations. For example, if an item of interest to the customer requires a long preparation time, the bot can indicate that the customer is likely to reach the establishment much earlier than when the order is ready for pickup, thus needing to wait for the order to be ready. Moreover, customer context can be used to indicate a time until when the customer may make changes to an already placed order. Such changes can include adding or removing individual items, adjusting desired pick up time, canceling the order, etc.
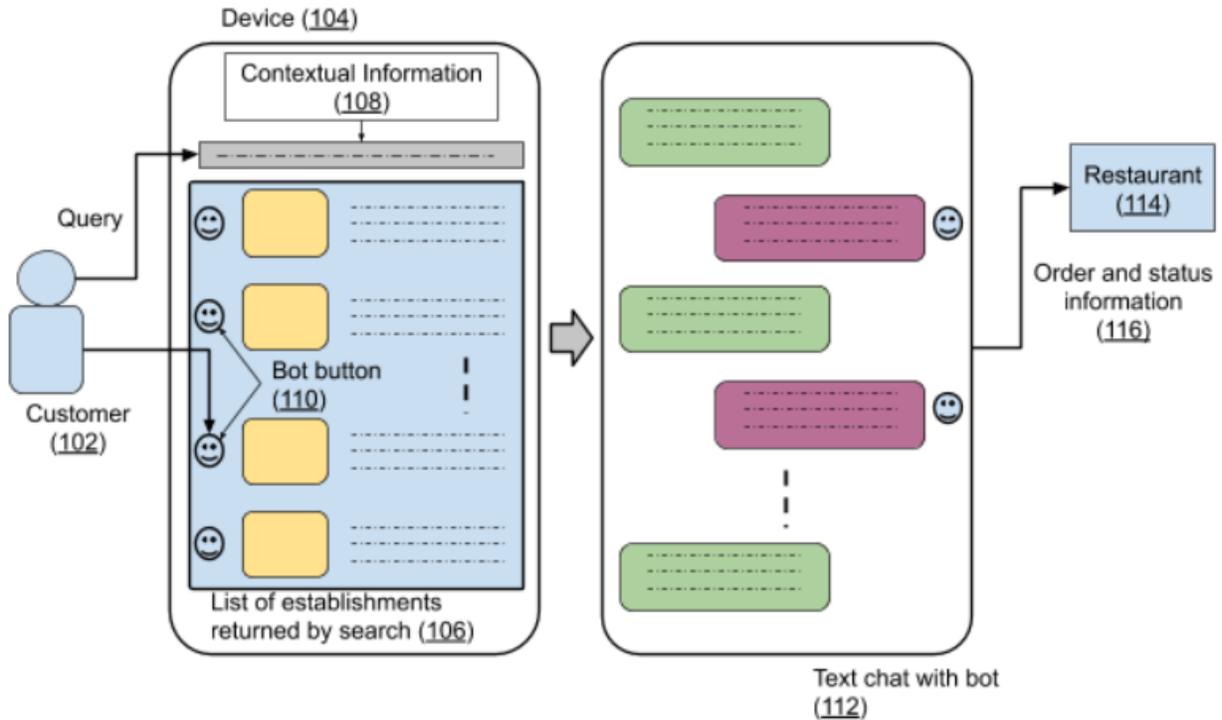
Fig. 1: Placing a restaurant pickup order via chat with a bot

Fig. 1 shows a customer (102) using a device (104) to search for a nearby restaurant to order dinner for pickup. The search results show a list of establishments (106) that fit the customer's query. With permission, relevant contextual information (108), such as the customer's location, can be used to select and rank the search results. Upon deciding to order from one of the establishments in the list, the customer presses a button (110) to invoke the order placement bot as described herein.

The customer interacts with the bot via text-based chat (112) (or voice) to select the items to be ordered for pickup. At the end of the interaction, the complete order (116) is relayed to the selected restaurant (114). From that time until order pickup, the customer is kept informed of relevant information about the order (116), such as estimated time when the order will be ready.

The described techniques can be further enhanced based on the customer's location and other relevant contextual information, if the customer provides consent to use such information. For instance, the schedule of preparing various items at the establishment can be set depending on the customer's estimated time of arrival and the preparation time required for the various items in the customer's order. Additionally, upon setting out to pick up the order and/or upon arriving in the vicinity of the establishment, the customer can receive order confirmation prompts and/or other relevant order information, such as the estimated time when the order will be ready for pickup.

If the customer permits, the customer's routines can be used to trigger reminders and/or suggestions for orders. For instance, a customer who is about to leave work at the end of the day can be asked if a takeout order for dinner should be placed so that it can be picked up on the way home. With customer permission, the reminders and/or suggestions can facilitate repeating and/or adjusting previously placed orders in order to make the ordering process more effective and efficient.

The described techniques can be implemented as a standalone system and/or integrated within existing systems and applications, such as maps, virtual assistants, search engines, establishment web sites, etc. For example, a virtual assistant can be configured to automatically provide order reminders, order suggestions, order status updates, etc. and to interact with the merchant, as instructed by a user of the virtual assistant via a suitable device, e.g., smartphone, smart speaker, home appliance, or other device that is configured with the virtual assistant.

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 support pickup orders various establishments via an automated interactive bot that uses voice and/or text-based chat interaction. With customer permission, relevant contextual information can be used to enhance the order placement interaction and order pickup experience. If the customer permits, the customer's typical routines can be used to trigger reminders and/or suggestions for orders. The described techniques can be implemented as a standalone system and/or integrated within existing systems or applications, such as maps, virtual assistants, search engines, websites, etc.