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Conversational Bots for Advertisements

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BACKGROUND

Advertising on the web (*e.g.*, through a desktop or mobile platform) typically does not provide the user with the ability to interact with the advertisement – *e.g.*, via a conversation (guided or unguided) for the user to obtain more information about the advertisement. Typically, the advertisement provides further information through such functionality as "clicking" on the advertisement that can bring the user to a website or app (*e.g.*, mobile app) associate with the advertisement.

In some cases, the advertisement can provide freeform text or selecting options (*e.g.*, image, text, buttons) to engage with a bot to obtain answers to any provided questions of the user. This allows the user to obtain answers to their specific questions without the user having to navigate to another website or app and obtain the answer there. However, current chat interfaces provided at locations such as mobile applications, mobile web interface, or desktop interfaces typically have the user conversing with a real person or a bot that is trained to answer questions using only a fixed set of preset information. Such chat interfaces with humans are expensive to scale, and typically, conversations with bots using limited information are not very satisfactory due to the limited ability to answer questions. Building a chat bot platform can be difficult as it is problematic to anticipate all the questions a user might ask, and thus, this leads to very low user satisfaction with chat bots.

DESCRIPTION OF DRAWINGS

Figure 1 is a diagram of an example chat bot environment.

DETAILED DESCRIPTION

This document discusses a chat bot platform that can improve its "knowledge" and ability to answer questions as users interact/chat more with the chat bot (*e.g.*, in real-world situations). Specifically, the chat bot platform improves in real-time by updating the chat bot's backend with live agent (human) answers. In some cases, the backend is updated offline – *e.g.*, when the developer analyzes the logs from the chats the developer can identify which questions were not answered, and in response, build/type in the answers and retrain and relaunch the chat bot backend. In some cases, the chat bots are retrained periodically.

Fig. 1 illustrates an example chat bot environment 100. The environment 100 includes a client computing device 102, a chat bot manager 104, and a server computing system 106. The chat bot manager 104 is in communication with the client computing device 102 and the server computing system 106 over one or more networks. The environment 102 further includes a data store 110 that the chat bot manager 104 is in communication with. The data store 110 can include data related to a set of knowledge – *e.g.*, questions and answers, keywords and text, images, mpas, video results.
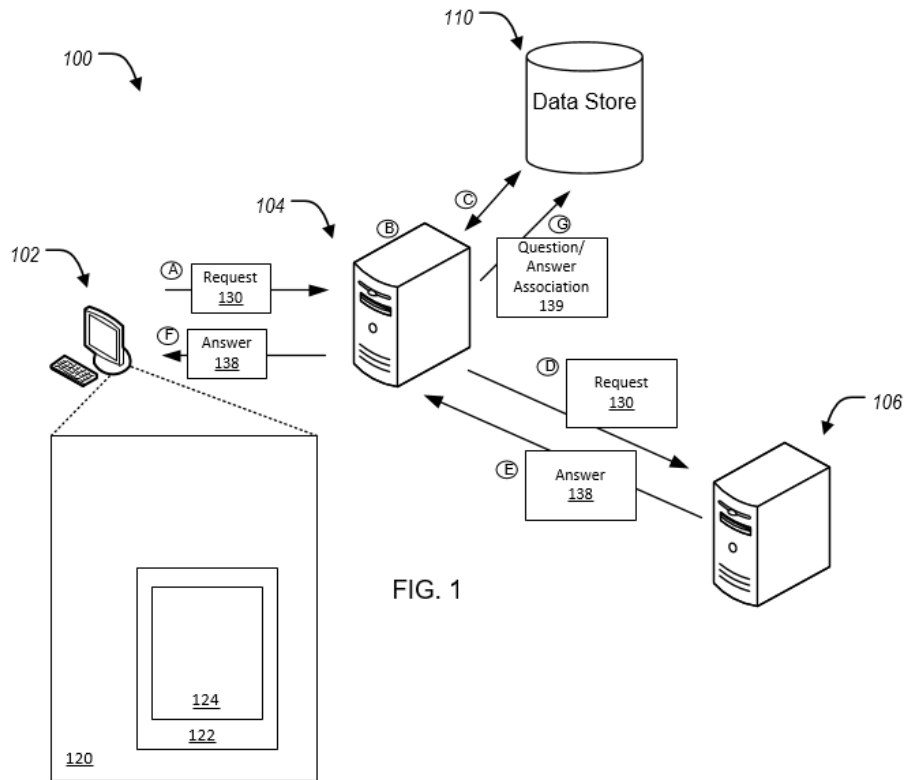
FIG. 1

The client computing device 102 can provide display of an electronic document 120 (*e.g.*, web page). The electronic document 120 can include an advertisement 122 that includes a chat interface 124. The chat interface 124 can provide an interface element for a user associated with the client computing device 102 to interact with.

The client computing device 102 provides a request 130 to the chat bot manager 104, at step A. For example, the request 130 is provided through the chat interface 124. The request 130 can include a question related to the advertisement 122. The chat bot manager 104 receives the request 130 and analyzes the request 130, at step B. Analysis of the request 130 can include identifying keywords (or strings of keywords) of the request 130. After analysis of the request 130, the chat bot manager 104 accesses the data store 110 to determine any correspondence between data stored by the data store 110 and the request 130 – *e.g.*, correspondence between any

keywords (or strings of keywords) of the request 130 and the data stored by the data store 110, at step C. In some cases, the chat bot manager 104, when determining correspondence between the request 130 and the data stored by the data store 110, is identifying any potential pre-determined answer(s) to the question of the request 130.

In some cases, the chat bot manager 104 identifies a correspondence between data stored by the data store 110 and the request 130 – *e.g.*, a pre-determined answer to the question. The chat bot manager 104 provides the data (answer) to client computing device 102.

In some cases, the chat bot manager 104 does not identify any correspondence between the data stored by the data store 110 and the request 130. That is, the chat bot manager 104 does not determine any correspondence between keywords (or strings of keywords) of the request 130 and the data of the data store 110. In response, the chat bot manager 104 directs the request 130 to the server computing system 106, at step D. The server computing system 106 can be associated with (e.g., currently operated by) a person. The person can analyze the request 130, and provide an answer 138 to the request 130. The server computing system 106 transmits the answer 138 to the chat bot manager 104, at step E. The chat bot manger 104 provides the answer 138 to the client computing device 102, at step F. In some cases, the server computing system 106 provides the answer 138 directly to the client computing device 102. The chat interface 124 included with the advertisement 122 provides display of the answer 138.

Further, the chat bot manager 104 stores data indicating an association 139 between the request 130 and the answer 138 (*e.g.*, keywords or strings of keywords of the request 130 and the answer 138) in the data store 110, at step G.

To that end, when the chat bot manager 104 receives an additional, further request that includes the same or similar keywords (or strings of keywords) as included by the request 130, the

chat bot manager 104 is able to identify the association 139 and the answer 138 without intervention by the server computing system 106 and/or the person.

By providing real-time answers to the question within the chat interface 124 of the advertisement 122, it allows the user providing the question to continue interaction with the electronic document 120 providing the advertisement 122. This allows more satisfied users. Further, by updating/training of the data store 110, costs are lowered by minimizing the need for humans to answer questions, while providing a continuously improving chat bot interface 124.

ABSTRACT

This document describes a chat bot interface that provides answers to user-submitted questions within a chat interface of an advertisement on a web page. The chat bot interface can initially provide answers to some questions based on a data store, while also including live agents to answer questions for which the chat bot interface cannot identify an answer from the data store. The answers provided by the live agents are used to update the chat bot interface and the data store such that when subsequent questions are received within the chat bot interface of the advertisement, the chat bot interface can respond accurately using the updated data store.