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## Input And Output Method Of Personalized Answers With Chatbot

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## **INPUT AND OUTPUT METHOD OF PERSONALIZED ANSWERS WITH CHATBOT**

### **ABSTRACT**

A system and method for enabling a user to search for personal information through information systems such as search boxes or chatbots are disclosed. The system allows the user to store identified personal information, and retrieve this information at any time and from anywhere through a search box or similar application. A pre-defined input format is used to instruct the search engine so that personal information inputs are distinguishable from other common search queries. The user can retrieve the information through the usual searching techniques or by asking a question to the system and the answer is returned as a search result. The system and method are capable of instructing the information system to learn explicitly personal information of the user, and functions as a true personal assistant running on any system or device.

### **BACKGROUND**

There are many information systems such as search boxes or chatbots available that enable a user to search for any information and obtain results through a universal user interface. Web search engines in return hunt for text in publicly accessible documents offered by web servers, as opposed to other data, such as the data in any private database or image. However, no information system exists in which a user can search for one's personal information. The current search boxes or chatbots do not have the ability to explicitly learn, memorize and retrieve answers for personalized questions of users. Currently, a user can store personal information like phone number/SSN/bank account in a document/email/memo online or offline. However, the information can be retrieved only using a particular interface of the application used for storing, and the user cannot get the results using a universal search interface. The user cannot simply

instruct the information system and allow the instruction or data to be stored and retrieved at any time and from anywhere. On the other hand, users' shareable personalized information, status, and answers to questions are stored in fragmented forms all over the Net. For example: a user can set up out-of-office status information in the email auto-reply; however, another user can know this information only by receiving an auto-reply email.

### DESCRIPTION

A system and method are proposed to instruct or train an information system to learn and memorize personal information that can be retrieved anytime and from anywhere through any search box/chatbot.

#### Part 1: Instructing the Search Box

A common input format is used to instruct the search engine the personalized question and answer. For example: by using a special symbol, like "?", or "???" in front, and at the end of the input message, so that the system can distinguish the personal information input from other common search queries. The common format to instruct the information system is depicted in FIG. 1. This method is applicable in any search engine or information system, or IM, or text processor application.

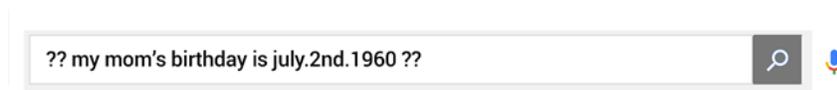


Fig 1: Instructing the Search Box

For example: if the user types in the following message in the format in any of the application: "?? My mom's birthday is July.2nd.1960??", then the system recognizes it as a piece of personal information from the user and will store this information linking to the user's account. In the future, the user can retrieve this information by simply asking the search engine

“when is my mom’s birthday” with a question mark symbol "?" in front and "???" in the end or complementary character "Q" in front and a complementary character "A" in the end. For voice search, the question can be provided by speaking complementary phrase “question" before uttering the real query “when is my mom’s birthday” and complementary phrase "answer" in the end.

## Part 2: Retrieving and Sharing Personalized Information

The user can retrieve the information through the search box by asking a question to the system, and receiving the answer as a search result. The method of retrieving and sharing of personalized information is depicted in FIG. 2. The sharing of personalized information can be limited to a group.

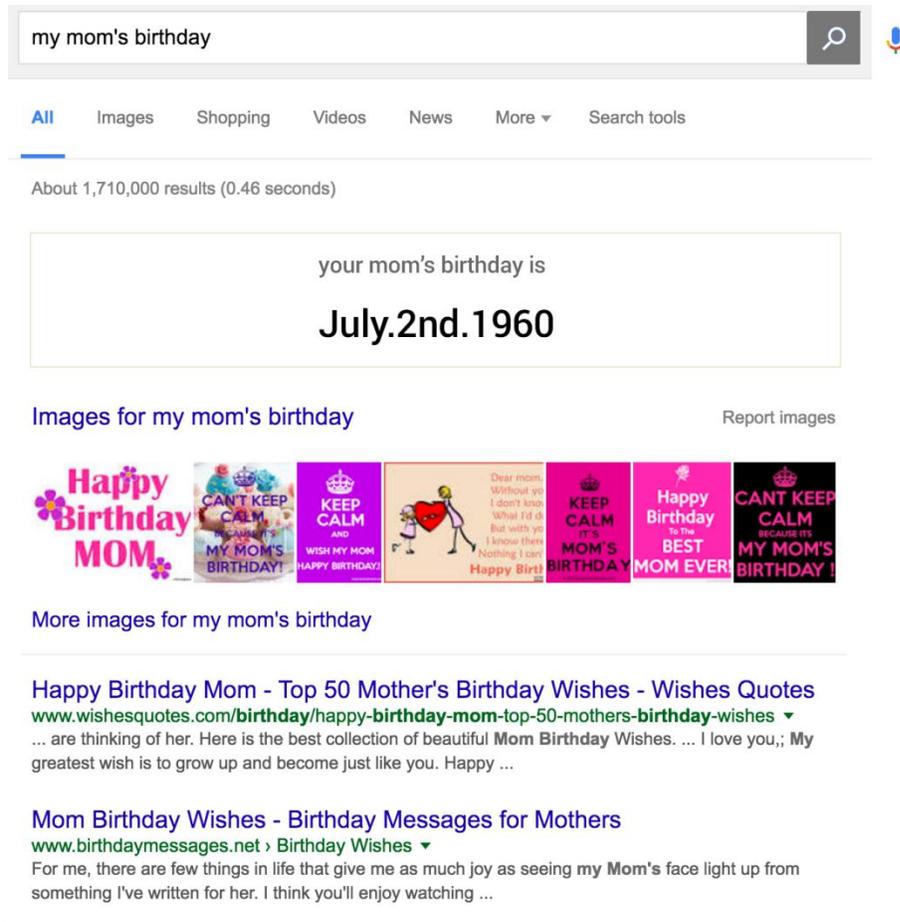


Fig 2: Retrieving and sharing of personalized information

For example: A user can instruct the system “I am on holiday, will be back next Monday, and share this with my co-worker”. If a co-worker asks the search box "where is Joe", the system will give them the answer. The search box will not provide any answer if the user is not a co-worker of Joe.

The following are more examples of personal information memory and data retrieval:

Q: What is my brother-in-law's address?

A: 1234, Fremont St. 98103, Seattle. (Exchanging shareable information between users)

Q: Where is Joe Smith?

A: Joe is on a holiday in Italy. (Based on Joe’s input of his status)

Personalized answers to topics could take the following form:

Q: What shall I visit in Munich?

A: Place A, B, C (from common POI). By the way, place D is Joe's favorite (if Joe and the user are connected on a social network)

The system and method are capable of instructing the information system to learn explicitly personal information of the user, and functions as a true personal assistant. The information system learns things from the user through the user interface and works on any system or device.