Summary of Eliza

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Eliza is a program which allows communication between user and a machine in natural way. As user interacts with Eliza, Eliza tries to understand the nature of interaction and then replies accordingly. At later stages when a users interaction with Eliza increases it seems that Eliza fulfills the role of a psychologist more effectively. There are couple of constraints which don’t offer Eliza a full fledge flexibility to behave completely like a human psychologist. For example if we as user ask a question to Eliza and append a question mark to the statement then it seems that Eliza doesn’t understand the question mark after a statement and eventually deletes the statement. Had it been a real human psychologist instead of Eliza then it would have simply answered that question. Similarly while we are communicating with Eliza, if Eliza has found something that was really important (keyword) and if we use a comma or a period then everything after a comma or period is ignored. If Eliza finds that there are two things that are important and that one of them needs to be discussed then it will discuss that thing which has a higher degree of importance. A user can easily find out certain loopholes while it is trying to communicate with Eliza. The user at certain stage of communication feels that Eliza is simply reiterating things. It appears like Eliza is a robot which is programmed to do a couple of tasks in a certain specified manner. For example Eliza does a couple of string manipulations based on keywords. When we concentrate on the role of user while communication, there are lot of constraints that are imposed on the user for example use of punctuation marks while communication may yield to something that is unexpected.

Following can be one way of implementing Eliza. The user feeds a sentence to a machine; the sentence is analyzed by Eliza. Eliza then finds out a word which appears to be important to it in the sentence, here we call it as a keyword. For example if user presents a statement like I am happy Eliza may use any of these words as a keyword if Eliza recognizes happy as keyword then it will search for a response which is related with a keyword happy. But before searching for a response Eliza first does some kind of processing on the sentence provided by the user. The processing of the sentence takes place by something called as rules. A rule is nothing but some kind of processing or transformation which is applied to the sentence. Whatever result we get using those rules is given
back to the user by machine. There are certain kinds of transformation rules like reassembly and decomposition used in Eliza. Decomposition is nothing but breaking down the statement into elements for example the user provides a statement like I am happy we can break the statement into three parts like 1) I 2) am 3) happy. The reassembly rule implies bringing all these parts together by replacement of certain elements or simply appending the user statement to some other statement.

For example In the statement provided by user I am happy a reassembly rule can be defined as replacement of I by you am by are and then printing a statement something like why are you happy?. In other words we can say that there is a language that Eliza speaks and that language has its own rules.

As far as the programming aspects of Eliza are concerned the author speaks about decomposing a statement based on certain criteria but he doesn’t mention about how to judge the criteria that we have decided. As in is it appropriate or not? Furthermore the author discusses about fixing priorities for the keywords but he doesn’t focus much on how to fix the priorities of the keyword.

At the end it can be concluded that a human can have illusions while it is communicating with Eliza (as in if it is communicating with real human). Humans have this illusion because it seems that Eliza understands what the humans are talking about. But this illusion wont last long and at later stages it seems that Eliza simply reiterates whatever it is taught.[1]

References