Mobile Doc

Project Report II

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Application Overview:

Our Applications is a suggestion algorithm where we will be suggesting the user about the particular drug’s effectiveness based on the health conditions he faced during his life and, In addition to that our algorithm will rate all the available drugs for the particular health condition and suggest them to the user. Our App is somewhat similar to Watson User modelling Demo where a HR based on requirement searches for a developer and the HR gets all the suggestions in the percentage model and here in our APP users searches a drug for a particular health condition he is facing right now our App will suggest all the drugs based on their effectiveness score given by our algorithm.

Summary:

For first iteration we are able to generate the effectiveness score of a particular medicine and show it to the user. For this iteration what we are able to do is get all the available medicines for a particular health condition and generate the effectiveness of all the medicines available for the medical condition what user is facing right now.

To get all the data to do the required processing we are using four different services, two are from the services provided by openFda which is a government organization and one service is provided by drugs.com and the other one is provided by Watson.

Workflow:

The first screen that we are going to show to the user consists of a drop down which has all the diseases and user can select all the health conditions he faced in his life and then the user asks the app whenever he faces any new health condition and our App will find the best medicine for this current condition

Services Used:

Adverse Effects:

We will be getting all the previous health conditions reported after using a particular drug and for getting all these conditions we will be using a service provided by openFda which basically returns all the diseases associated with a particular drug in JSON format.

End Point: https://api.fda.gov/drug/event.json

Drug Label:

There will be always side effects which will be listed on the label of the drug. We will be using this info to warn the user about potential side effects. For getting this info we will again be hitting openFda databases using RESTful services provided by them.

End Point: <https://open.fda.gov/drug/label/reference/>

Medicines:

In our application we will be suggesting user about all the available drugs for the health condition. For getting all the medicines for any health condition we will be using info from Drugs.com website. Duhs.com is not providing any RESTful or SOAP based services and no other websites are providing the medicines with such high quality. So Drugs.com left us no option but to scrap the data from their website.

Example URL: http://www.drugs.com/condition/bronchitis.html

Speech to Text:

We are thinking about implementing everything with voice based controls which requires very minimal or no touch based interactions from the user. For implementing that we have to use either google vice API or Speech to text based API from Watson services.

Github URL for source code:

<https://github.com/surapanenipraveen52/Project-Report-2>

Project Management:

Back End and Open FDA: Praveen Kumar Surapaneni (21), Vinod Kumar Vakalapudi (23)

Android UI: Uma Maheshwararao Kothuri (17), Venkat Guttikonda (13)

Watson Services: Dheeraj Polisetty, James Dowling.

Third Increment:

Right now in our application user has to enter all the medical conditions he ever faced and the medical conditions he is facing right now, this is a tedious procedure when you consider that user is already facing some kind of health condition, So we want implement an app which will be completely voice based and will be super fun to use. For that we will be using speech to text api and we have to understand the text from this api and parse it using tools provided by openNLP, Text runner and many other language processing APIs.

Blockers:

No Voice to Text API is able to recognize the drug and disease names as they are very complex to parse.

Note: As we are developing android app, we have provided screen shots as seen below. And we are not deploying our project into bluemix environment.

Screen Shots:

 

