

# **CS-5542 BIG DATA ANALYTICS AND APPLICATIONS SPRING 2016**

## **PROJECT PLAN AND SECOND INCREMENT REPORT**

### **GROUP-4**

#### **Introduction:**

RoboCare – A human friendly robot, one's own personal doctor. As its name suggests, this robot takes good care of his companion right from diagnosing the disease to notifying the user the nearest practitioner who can prescribe medicines. All that the robot needs is few inputs from the user and it does all the work on its own. RoboCare does take help of the Smart watch and the Smart Phone of the user to provide many other functionalities. Thus, RoboCare can be regarded as a guide to make a human's life illness free.

#### **Project Goal and Objective:**

- Overall goal: To program a robot which can be used as a medical assistant.
- Specific objectives (problem statement): The main objective of the robot is to diagnose the disease that the user has depending on the inputs such as age, gender, symptoms, images etc. provided by the user.
- Specific features:  
The Robot will perform following tasks:
  - Use facial recognition technique to authenticate the user.
  - Collect the data from the user regarding the symptoms age and gender from his voice and would use Natural Language Processing and also images to identify the issue
  - Diagnose the disease depending on the inputs provided by the user
  - Suggest nearest doctor depending on the type of disease to the user
  - Remind the user about his/her appointment by sending notification
- Significance  
The robot provides the user with immediate information about the disease, nearest doctor and also keeps him notified about the appointment timings and prescription as and when it arrives from the doctor. Thus, the robot guides the user properly during its difficult times.

## **Second Increment Report:**

- Existing API:  
Used Android Studio 1.5.1 to develop the graphical user interface of the application and the inbuilt APIs for Speech to text conversion
- Design of Features:
  - Developed a user friendly GUI wherein after the user speaks, a dialog box appears which allows the user to select symptoms.
  - After selecting a particular symptom, it will be added to the list of symptoms.
  - The user can also modify it later as required by long pressing the symptom to be changed.
  - After selecting the list of symptoms, after the user presses the 'Know Disease' button, the application predicts the disease depending on the symptoms provided.
- Dataset  
Developed a Comma Separated value (.csv) data sheet file consisting of information of various diseases and their symptoms
- Implementation:  
Application for a Smart phone
- Deployment:



29% 11:55 PM

RoboCare



**ROBO CARE**

Care for Living

Robo is here to listen you



HEADACHE

KNOW YOUR  
DISEASE

RECORD AGAIN



29% 11:55 PM

RoboCare



**ROBO CARE**

Care for Living

Robo is here to listen you



BODY PAIN

---

COLD

---

HEADACHE

---

KNOW YOUR  
DISEASE

RECORD AGAIN



29%



11:56 PM

RoboCare



**ROBO CARE**  
Care for Living

Delete Entry

Do you want to remove COLD

NO

YES

HEADACHE

KNOW YOUR  
DISEASE

RECORD AGAIN



29% 11:56 PM

RoboCare



# ROBO CARE

Care for Living

Robo is here to listen you



BODY PAIN

---

HEADACHE

---

KNOW YOUR  
DISEASE

RECORD AGAIN



12:07 AM

RoboCare



**ROBO CARE**

Care for Living

Name : Robert Bob

Age : 24

Gender : ☒ Male ☐ Female

Predicted Disease: Cancer



Know about your Disease



Know your Doctor

- GitHub URL :  
<https://github.com/anuja893/CS5542-Spring2016Group4>
- Project Management:  
**Member Name: Anuja Sawant**  
 Work Completed:  
 1. Prepared dataset and report generation  
 2. Worked on speech to text part of the application  
 Time Taken: 10 days  
 Contributions: 25%  
**Member name: Shuchita Khandelwal**  
 Work completed:  
 1. Prepared the final updated dataset  
 2. Worked on speech to text part of the application  
 Time taken: 10 days  
 Contribution: 25%  
**Member Name: Podili,Venkata Krishna**  
 Work Completed:  
 1. Created the GUI Part  
 2. Classification of symptoms by the application  
 Time taken: 12 days  
 Contribution: 25%  
**Member Name: Dara,Venkata Sai Sandeep**  
 Work Completed:  
 1. Worked on the GUI Part  
 2. Prediction of diseases depending on the symptoms  
 Time taken: 15 days  
 Contribution: 25%
- Bibliography:  
<https://www.nlm.nih.gov/medlineplus/encyclopedia.html>  
<http://seer.cancer.gov/tools/seerrx/>  
<http://stackoverflow.com/> \ <http://www.mayoclinic.org/>