

LifeLine

- **Team Name:** Excalibur
- **Team Members:** 1. Akshay Dilip Abhang.
2. Aniket Satish Jadhav.
- **Project Title and Topic:** Shortlisting best and nearest healthcare services.
- **Project Type:** Custom

1. Introduction:

After coming to USA, we found that getting healthcare information is difficult for the international students. So, it must be as hard for disabled people who can't go out of the house or who don't know about locality. Because of this, it's is very difficult to find nearest and best healthcare in the situation of emergency.

Our main aim was to develop an easy and convenient healthcare system to get the information regarding healthcare easily.

So, we have decided that if we find best and nearest hospital (tradeoff between distance and service), it would be helpful for patients and newly settled people to save time and life.

2. Target Audience:

Project is designed mainly for common people. We have considered problem of common people and built this project based on that.

Consider, international student coming to USA first time. So, in case of medical emergency, he/she must be aware of nearest and best healthcare center.

Similarly, for people moving to new states who are unaware of surroundings, this project will be helpful for them to find health care services in case of need.

Also, as part of this project, we have done analysis of cities, hospitals and number of patients in united states and shown them using graphical data. This can be useful for research purpose and improving health care services around that specific area.

3. Data Sets

A. Timely and Effective Care – Hospital

This data set includes provider-level data for measures of cataract surgery outcome, colonoscopy follow-up, heart attack care, emergency department care, preventive care, blood clot prevention, pregnancy and delivery care, and cancer care. It has 90403 entities and it is available in below link.

Link: <https://catalog.data.gov/dataset/timely-and-effective-care-hospital-e4aad>

B. Hospital General Information

A list of all Hospitals that have been registered with Medicare. The list includes addresses, phone numbers, and hospital type. It has 5091 entities and it is available in below link.

Link: <https://catalog.data.gov/dataset/hospital-general-information>

C. Potentially Excess Deaths from the Five Leading Causes of Death

In this dataset, it is found that nonmetropolitan areas have significant numbers of potentially excess deaths from the five leading causes of death. These figures accompany this report by presenting information on potentially excess deaths in nonmetropolitan and metropolitan areas at the state level. It has 205921 entities and it is available in below link.

Link: <https://catalog.data.gov/dataset/nchs-potentially-excess-deaths-from-the-five-leading-causes-of-death>

D. 500 Cities: Local Data for Better Health It has data of 500 cities and census tract. :

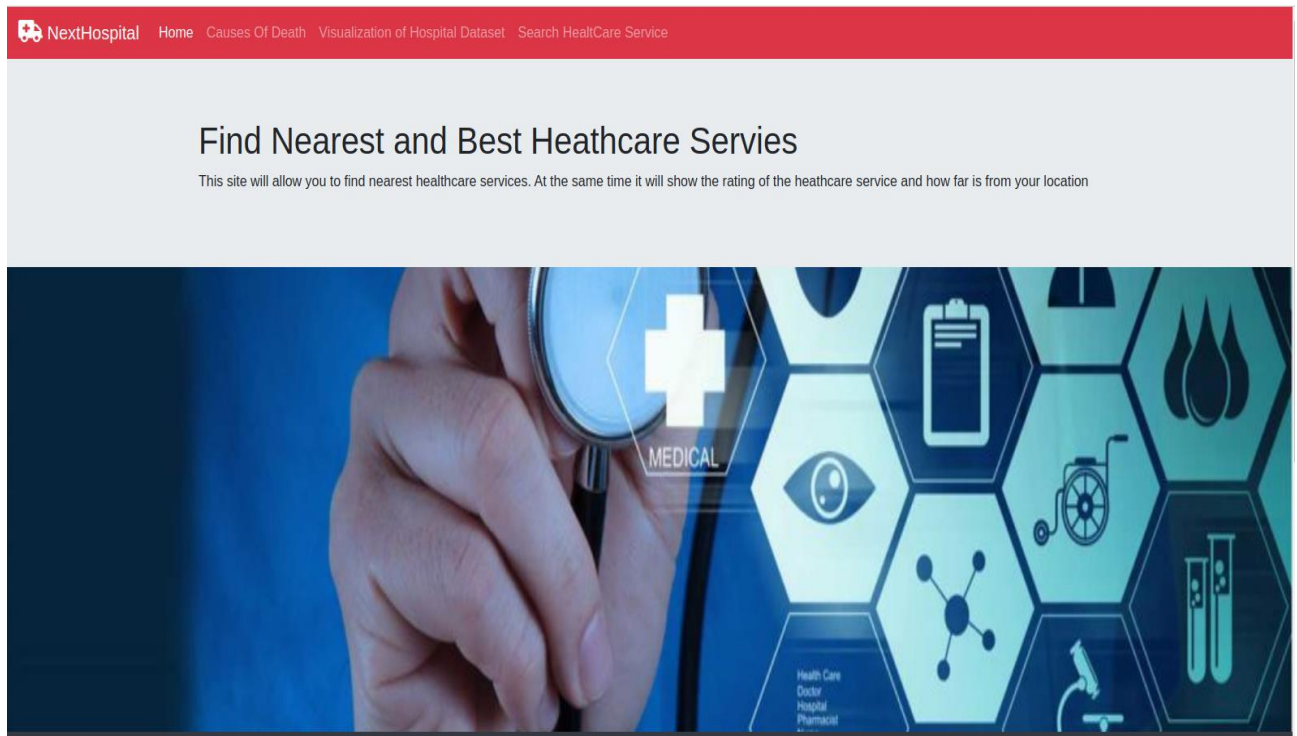
It will be used to find patients or users in specific area. It has 810104 entities and it is available in below link.

Link: <https://catalog.data.gov/dataset/500-cities-local-data-for-better-health-fc759>

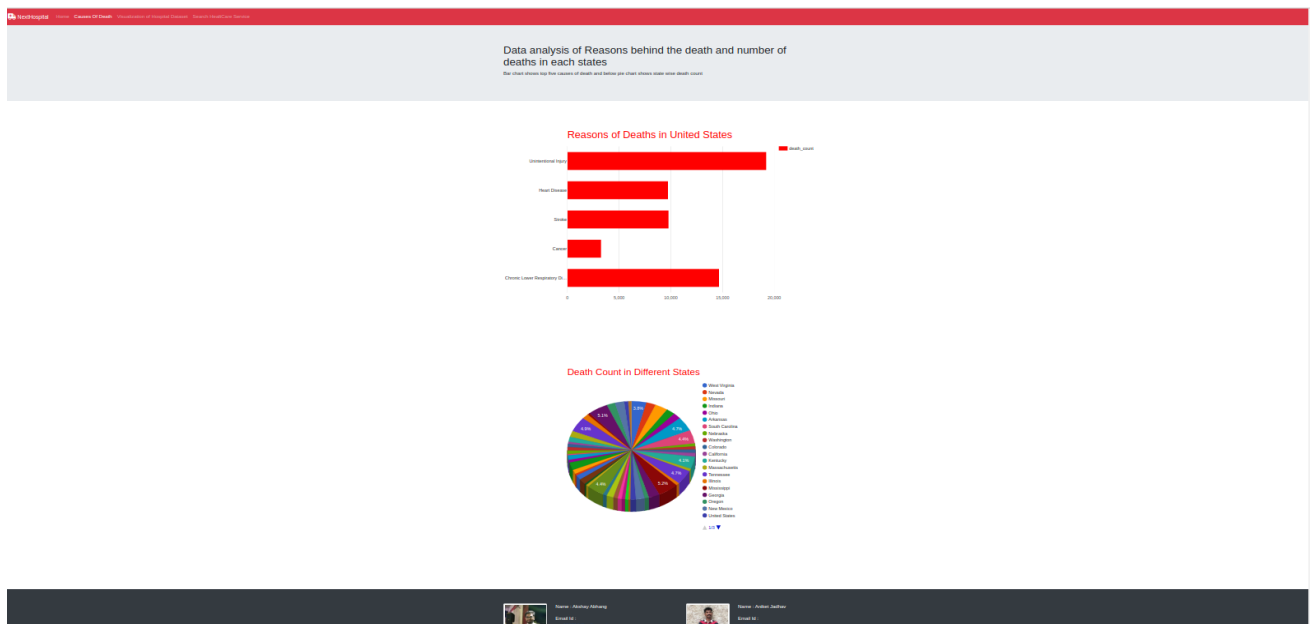
4. Data Integration:

Data is obtained from different government sites mentioned above. Some of these data sets are in RDF format and some of them are in CSV. But for integration with Apache Jena Fuseki, it accepts data only in rdf format. So, we have converted CSV data to RDF format using csv2rdf4lod-automation tool. After converting that data to RDF, we have uploaded that data to Fuseki and created SPARQL end points. With the help of these end points we have executed our SPARQL queries.

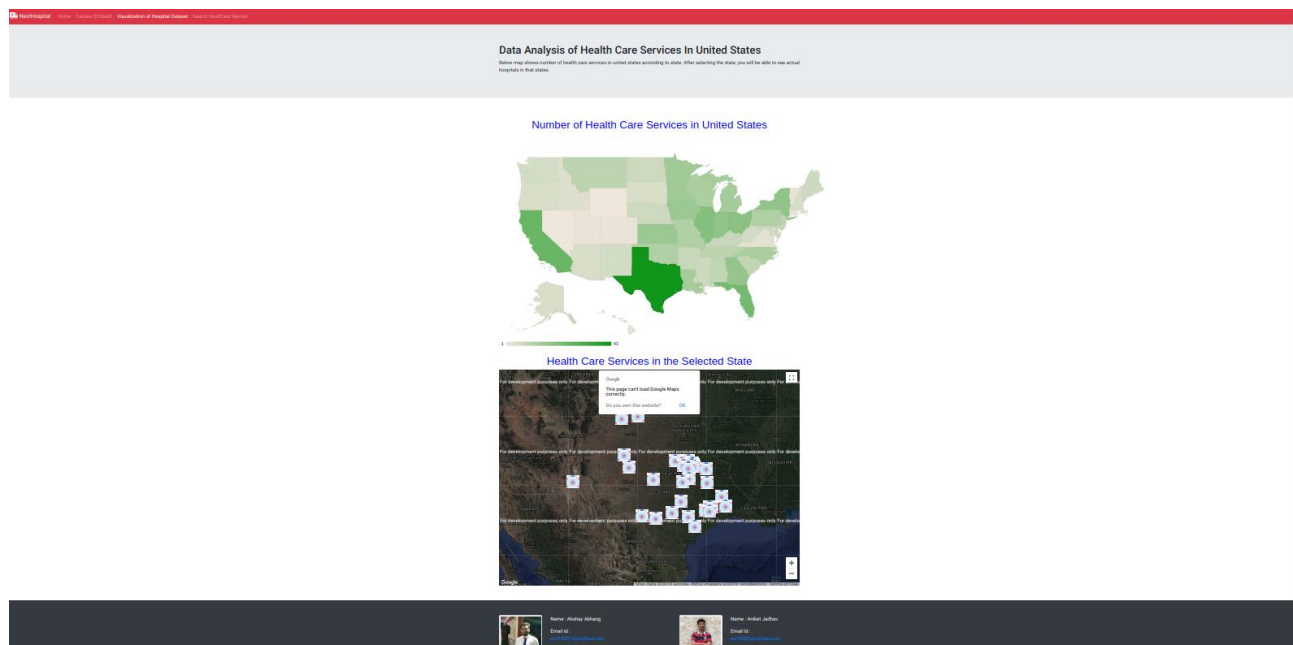
5. Data Product Result:



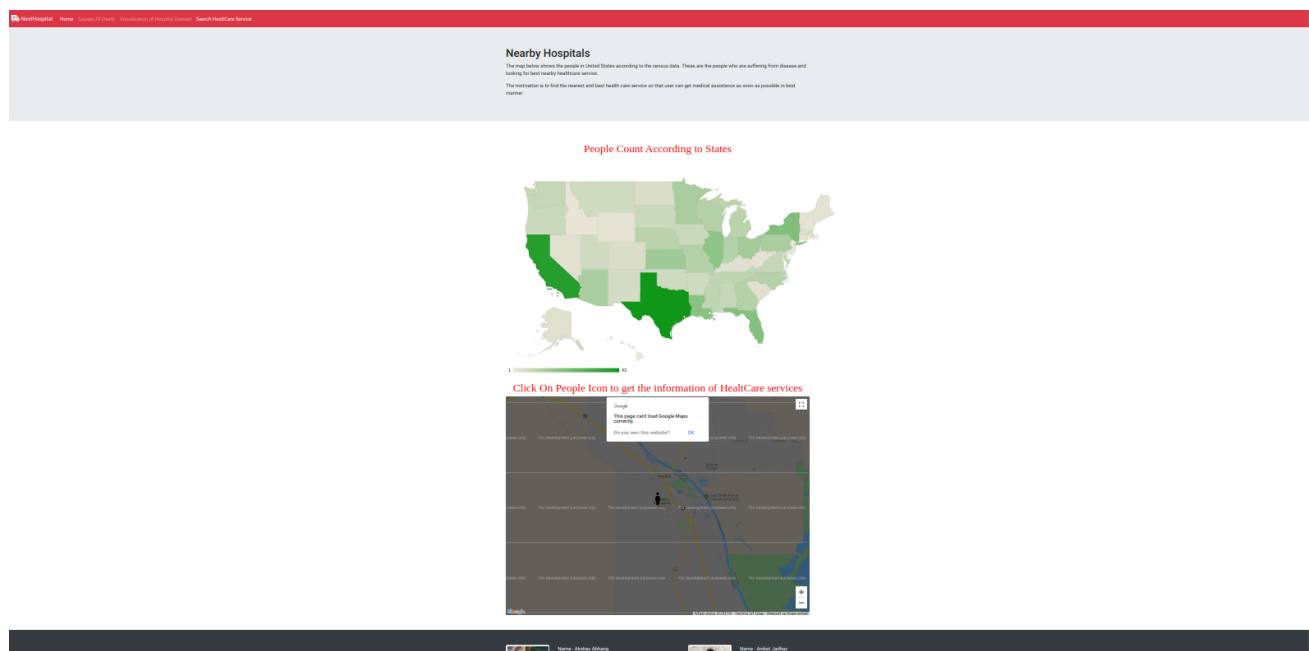
Home Page



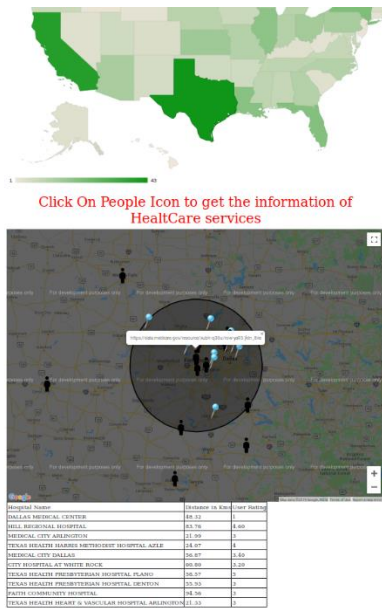
Shows reasons for death and their count



Displays Number of Hospitals in selected state



Show people from selected state



Displays the nearby hospitals based on location and their rating (Combined)

6. Custom Project Justification:

As we needed different data for number of patients who have diseases to find major cause of death, to find number of hospitals in cities. We needed data from multiple sources and all information related to hospital like location, name, rating as well as number of patients in specific region, all this information was not available in single data set.

7. Summary:

In this project, we have analyzed data sets of cities, hospital, causes of death and visualized data in the form of graph. Also, we have provided mechanism for user to search for health care services in his/her department. In this way, ultimate aim of this project is achieved