**DEATH RATE FINDER**

**Introduction:**

Death Rate Finder will be a search based web application which will enable the users to search for the death rate, cause of death as well as year of death in the states of America. The project will handle a real-world death rate dataset from the government website. By using this web application the user will be able to know about the death rate in particular state as well as the cause of the death. The application will provide the users with authentication which will help them save their search history.

**Objectives:**

1. Analyzing the present data from government data, pre-processing and cleaning the dataset (like handling missing values, normalizing and featuring data).
2. Converting the data in json format and storing in cloud storage like firebase for maximum availability and quick response times.
3. Building a user-friendly website for the users to search through Death Rate based on many search criterions picked from the attributes of the data set like cause of death.
4. Implementing user login authentication and saving the search history based on user logged in.
5. Implementing faceted search on 3-4 features from the dataset.
6. Integrating all the modules and testing the web application for its functionality, efficiency and correctness.

**Data Usage:**

This application will handle JSON data stored in firebase in the form of key-value pairs. The data will be updated in real time based on the additions made on the source website**.**

**Data Source:**

The real-world data set used in the application is fetched from:

<https://catalog.data.gov/dataset/age-adjusted-death-rates-for-the-top-10-leading-causes-of-death-united-states-2013>

**Data Storage:**

The data will be stored in firebase since it gives a basic and unified platform with many Google features packed-in making the development process easier and more efficient by providing real-time database, cloud storage etc.

**Components of the application:**

The application will have 2 key components

1. **User Interface:** The UI will be a web browser containing search facets and an user login functionality where users can login and save their searches for future reference.
2. **Database:** We will use firebase for storing username, password, search indexes as well as real time data from the data source**.**

**Interface:**

We plan to implement this web application using HTML and industry standard Java frameworks for better user experience along with firebase.

**Programming languages and libraries:**

* Js
* Angular Js
* Firebase Js client
* Jquery
* HTML
* CSS
* Python

**Group Information:**

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We plan to work collaboratively on the project working and contributing alternatively on each part of the project implementation.

**Milestones:**

1. Week I & II
2. Load csv to json and data cleansing, data pre-processing(if needed).
3. Breaking down the search facets into tokens and storing them on firebase.
4. Week III & IV
5. Database creation, storage and linking for users and guest login
6. Week V & VI
7. Logic building
8. Implementing the search functionality
9. Preparing the mid-term report
10. Week VII
11. Making the UI for the website.
12. Preparing the mid term report
13. Week VIII & IX
14. Testing the authentication and building connectivity of the website with login database
15. Preparing the final report
16. Testing the project thoroughly and preparing for final submission.