PROJECT REPORT

IBM-Project-28551-1660113597

TITLE:

Skill / Job Recommender Application

TEAM LEADER:

SADDALA DHANYASREE

TEAM MEMBER:

- GOPI KRISHNAN M
- ADHAVAN R
- KRISHNAKUMAR S

TEAM ID:

PNT2022TMID07356

1 INTRODUCTION

1.1 Project Overview

Job recommendation is an important task for the modern recruitment industry. An excellent job recommender system not only enables to recommend a higher paying job which is maximally aligned with the skill-set of the current job, but also suggests to acquire few additional skills which are required to assume the new position.

In this work, we created three types of information networks from the historical job data: (i) job transition network, (ii) job-skill network, and (iii) skill co-occurrence network. We provide a representation learning model which can utilize the information from all three networks to jointly learn the representation of the jobs and skills in the shared k-dimensional latent space.

In our experiments, we show that by jointly learning the representation for the jobs and skills, our model provides better recommendation for both jobs and skills. Additionally, we also show some case studies which validate our claim.

To develop an end-to-end web application capable of displaying the current job openings based on the user skillset.

The user and their information are stored in the Database. An alert is sent when there is an opening based on the user skillset.

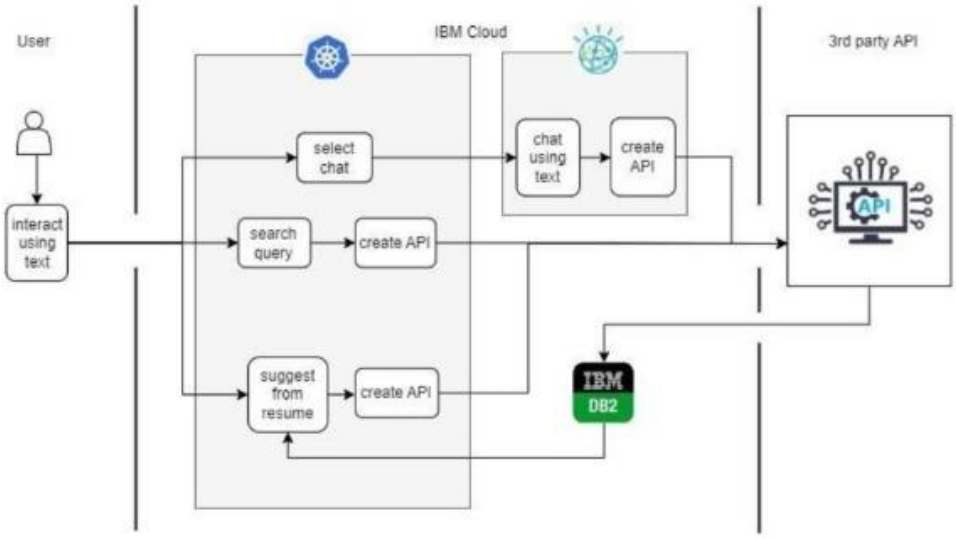
Users will interact with the chatbot and can get the recommendations based on their skills.

We can use a job search API to get the current job openings in the market which will fetch the data directly from the webpage

1.2 Purpose

An excellent job recommender system not only enables to recommend a higher paying job which is maximally aligned with the skill-set of the current job, but also suggests to acquire few additional skills which are required to assume the new position.

To create a software that filters the job based on the skillset of the candidates who are seeking for the job. Then that filtered job is recommended for that candidates based on their skillset.



2 LITERATURE SURVEY

2.1 Existing problem

"Job Recommendation based on Job Seeker Skills. Jorge ValverdeRebaza ,Ricardo Puma ,Paul Bustios Nathalia C. Silva. : First Workshop on Narrative Extraction From Text co-located with 40th European Conference on Information Retrieval March 2018"

In this ,when a candidate submits his/ her profile at a job seeker engine.

Their job recommendations are mostly suggested taking their academic qualification and work experience into considerations.

A survey of job recommender systems, Shaha Alotaibi ,International Jounal of Physical Sciences July 2012"

The recommender system technology aims to help users in finding items that match their personnel interests, it has a successful usage in e-commerce applications to deal with problems related to information overload efficiently.
This article will present a survey of e-recruiting process and existing recommendation approaches for building personalized recommender systems for candidates/job matching

A Research of Job Recommendation System Based on Collaborative Filtering: Cheng Yang,Yingya Zhang,Zhixiang Niu, 2014 Seventh International Symposium on Computational Intelligence and Design, December 2014"

It analyze the candidate's resume and the companies' recruitment guidelines.
To compare and come to a better conclusion upon finding the best suited candidates for the job

2.2 References

[1] Schafer J B, Frankowski D, Herlocker J, et al.

Collaborative _ltering recommender systems[M]//The

adaptive web. Springer Berlin Heidelberg, 2007: 291-324.

[2] Pazzani M J, Billsus D. Content-based recommendation systems[M]//The adaptive web. Springer Berlin Heidelberg, 2007:325-341.

[3] Sarwar B, Karypis G, Konstan J, et al. Item-based collaborative _ltering recommendation algorithms[C]//Proceedings of the 10th international conference on World Wide Web. ACM, 2001: 285-295.

[4] Nikolaos D. Almalis ,Prof. George A. Tsihrintzis , Nikolaos Karagianniset al."FoDRA - A New Content-Based Job Recommendation Algorithm for Job Seeking and Recruiting".

[5] Anika Gupta, Dr. Deepak Garg. "Applying Data Mining Techniques in Job Recommender System for Considering Candidate Job Preferences".

[6] Dunning T. Accurate methods for the statistics of surprise and coincidence[J]. Computational linguistics, 1993, 19(1): 61-74.

[7] Emmanuel Malherbe , Mamadou Diaby , Mario Cataldi et al. "Field Selection for Job Categorization and Recommendation to Social Network Users". 2014 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2014).

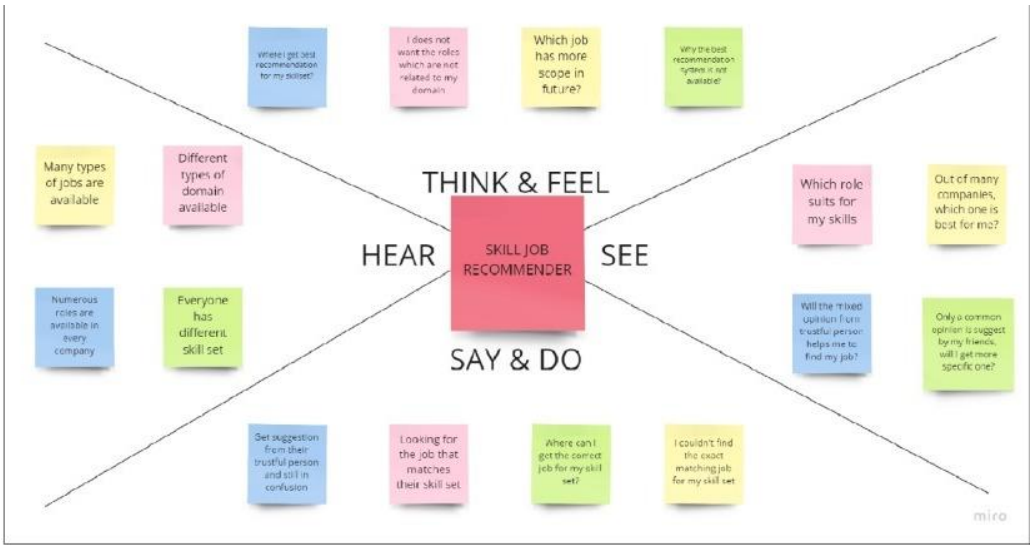
2.3 Problem Statement Definition

Having lots of skills but wondering which job will best suit you? Don't need to worry! We have come up with a skill recommender solution through which the fresher or the skilled person can log in and find the jobs by using the search option or they can directly interact with the chat bot and get their dream job.

To develop an end-to-end web application capable of displaying the current job openings based on the user skillset. The user and their information are stored in the Database. An alert is sent when there is an opening based on the user skillset. Users will interact with the chat bot and can get the recommendations based on their skills. We can use a job search API to get the current job openings in the market which will fetch the data directly from the webpage.

3 IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming

3.3 Proposed Solution

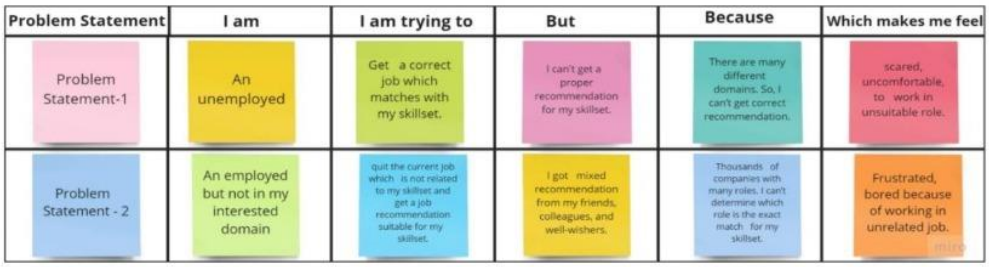
S .No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Having lots of skills but wondering which job will best suit you? Don't need to worry! We have come up with a skill recommender solution through which the fresher or the skilled person can log in and find the jobs by using the search option or they can directly interact with the chatbot and get their dream job. To develop an end-to-end web application capable of displaying the current job openings based on the user skillset. The user and their information are stored in the Database. An alert is sent when there is an opening based on the user skillset. Users will interact with the chatbot and can get the recommendations based on their skills. We can use a job search API to get the current job openings in the market which will fetch the data directly from the webpage.

2.	Idea / Solution description	The contributions of this work are threefold, we: i) made publicly available a new dataset formed by a set of job seekers profiles and a set of job vacancies collected from different job search engine sites ii) put forward the proposal of a framework for job recommendation based on professional skills of job seekers iii) carried out an evaluation to quantify
		empiíically the recommendation abilities of two state-of-the-art methods, considering different configurations, within the proposed fssramework. We thus present a general panorama of job recommendation task aiming to facilitate research and real-world application design regarding this important issue.
3.	Novelty / Uniqueness	The best position are suggested to any person according to her skills.While the position of known profiles are assumed

3.4 Problem Solution fit

Customer Problem Statement:

Discussion:



4 REQUIREMENT ANALYSIS

4.1 Functional requirement

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Sign in / Login	Register with username, password
FR-2	Profile Registration	Register with username, password, email, qualification, skills. This data will be stored in a database.
FR-3	Job profile display	Display job profiles based on availability, location, skills.
FR-4	Chatbot	A chat on the webpage to solve user queries and issues.
FR-5	Job Registration	The company's registration/Description details will be sent to the registered email id of the user.
FR-6	Logout	Use logout option after completing job registration process.

4.2 Non-Functional requirements

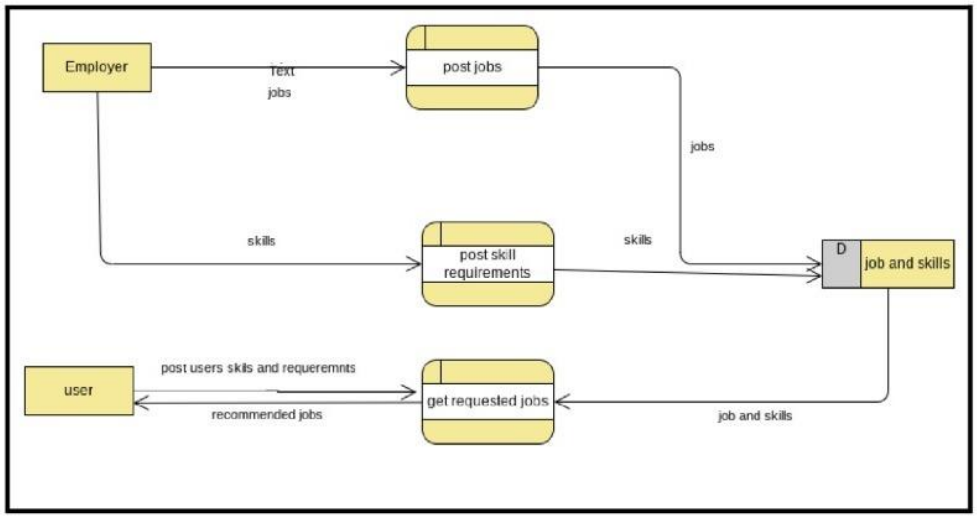
Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

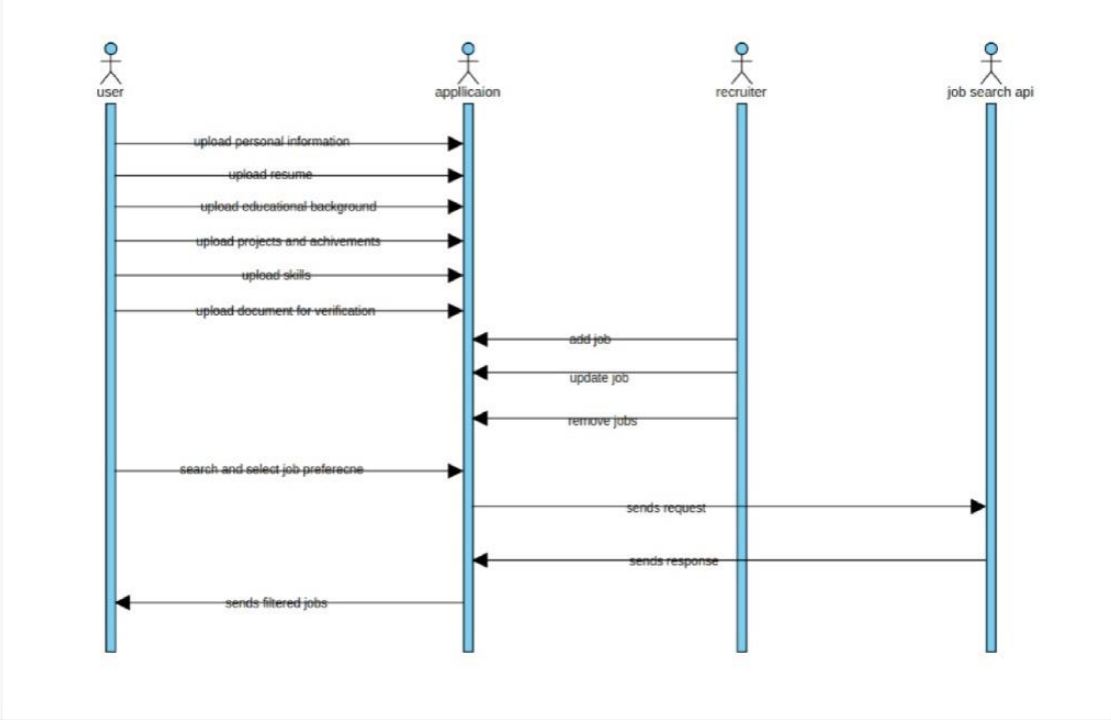
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The webpage will be designed in such a way that any non-technical user can easily navigate through it and complete the job registration work. (easy and simple design)
NFR-2	**Security**	Using of python flask to cloud connect will provide security to the project. Database will be safely stored in DB2.
NFR-3	**Reliability**	To make sure the webpage doesn't go down due to network traffic.
NFR-4	**Performance**	Focus on loading the webpage as quickly as possible irrespective of the number of user/integrator traffic.
NFR-5	**Availability**	The webpage will be available to all users (network connectivity is necessary) at any given point of time.
NFR-6	**Scalability**	Increasing the storage space of database can increase the number of users. Add some features in future to make the webpage unique and attractive.

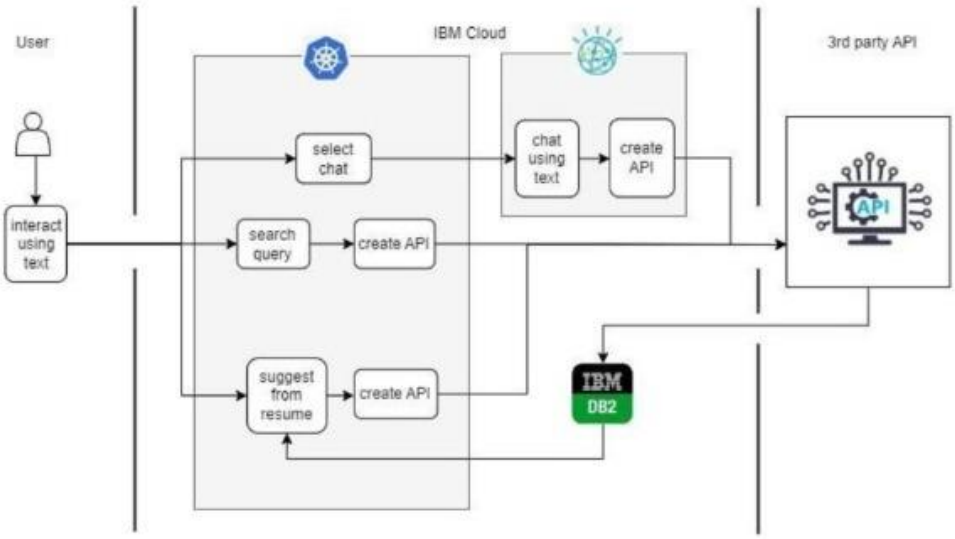
5 PROJECT DESIGN

5.1 Data Flow Diagrams



5.2 Solution & Technical Architecture





5.3 User Stories

Project Planning Phase
Project Planning Template (Product Backlog,Sprint Planning, Stories, Story points)

Team ID	PNT2022TMID07356
Project Name	Project - Skill and Job Recommender
Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule.

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, phone number, and username.	1	Low	Gopi krishnan M
Sprint-1		USN-2	As a user, I can register for the application through Gmail.	1	Low	Gopi krishnan M

Sprint-1		USN-3	As a user, I will receive a confirmation email once I have registered for the application	1	Low	Gopi krishnan M, Saddala Dhanyasree, Aadhavan R
Sprint-1		USN-4	As a user, I will have to enter the details specified in my Resume in the form given.	2	High	Gopi krishnan M, Saddala Dhanyasree, Aadhavan R
Sprint-1	Login	USN-5	As a user, I can log into the application by entering my email or username & password	1	High	Gopi krishnan M, Saddala Dhanyasree, Aadhavan R, Krishna Kumar S
Sprint-2	Dashboard	USN-6	As a user, I will be able to view my Dashboard along with other services.	2	Medium	Aadhavan R, Krishna Kumar S
Sprint-2		USN-6	As a user, I will be able to view the courses for the required	2	Medium	Gopi krishnan M, Aadhavan R

			skills.			
Sprint-2		USN-7	As a user, I will be able to search for jobs as per the criteria mentioned in my resume.	2	High	Saddala Dhanyasree, Krishna Kumar S

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3		USN-7	As a user, I will be able to find government jobs according to my qualifications.	3	High	Gopi krishnan M, Aadhavan R
Sprint-3	Communication	USN-7	As a user, I will be able to chat with a job recommender bot and get suggestions.	3	High	Gopi krishnan M, Saddala Dhanyasree ,Aadhavan R, Krishna Kumar S
Sprint-4		USN-7	As a user, I will be able to chat with a job recommender	3	High	Gopi krishnan M, Saddala Dhanyasree

			bot and get suggestions.			,Aadhavan R, Krishna Kumar S
Sprint-4	Notification	USN-8	As a user, I will receive notifications regarding availability	3	Medium	Saddala Dhanyasree ,Aadhavan R

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date(Planned)	Story Points Completed (as on Planned End Date)	Story Points Completed (as on Planned End Date)
Sprint-1	20	6 Days	24 Oct 2022	29Oct2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	5Nov2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov2022	12Nov2022		
Sprint-4	20	6 Days	14Nov 2022	19Nov2022		

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day) .

			bot and get suggestions.			,Aadhavan R, Krishna Kumar S
Sprint-4	Notification	USN-8	As a user, I will receive notifications regarding availability	3	Medium	Saddala Dhanyasree ,Aadhavan R

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Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day) .

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown Chart:

A burndown chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.

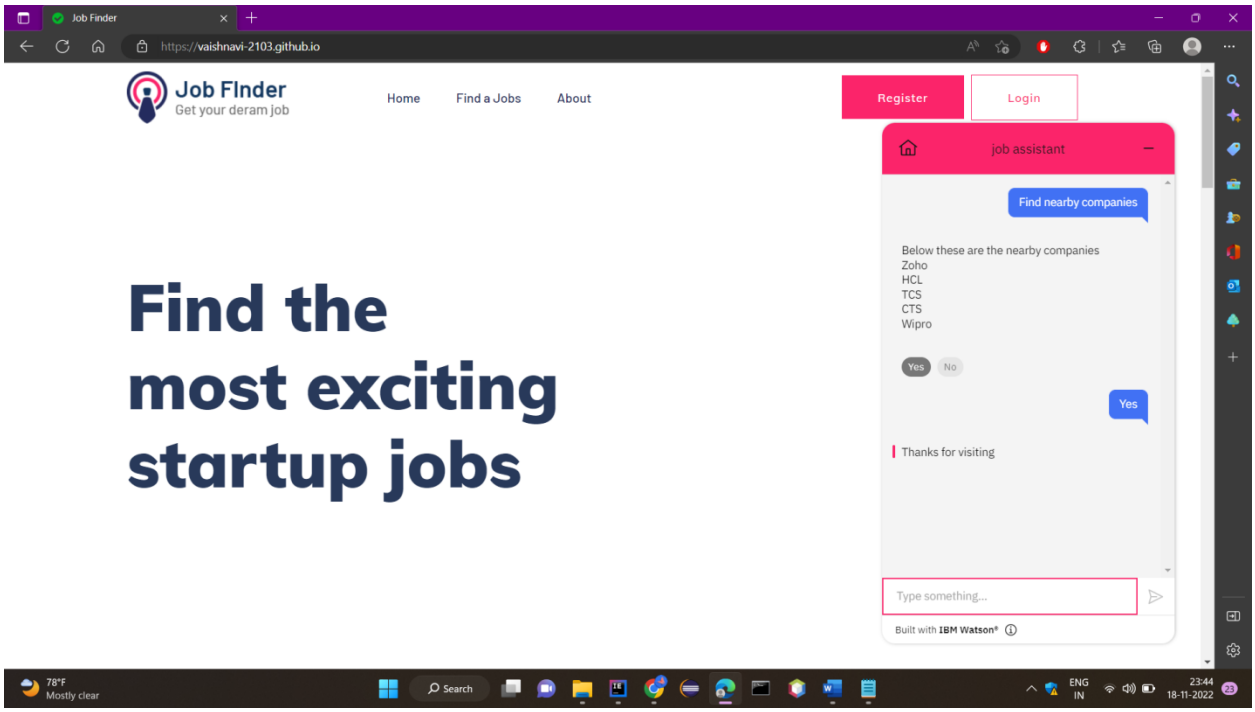
https://www.visual-paradigm.com/scrum/scrum-burndown-chart/
https://www.atlassian.com/agile/tutorials/burndown-charts

Reference:

https://www.atlassian.com/agile/project-management
https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software
https://www.atlassian.com/agile/tutorials/epics
https://www.atlassian.com/agile/tutorials/sprints
https://www.atlassian.com/agile/project-management/estimation
https://www.atlassian.com/agile/tutorials/burndown-charts

6 CODING & SOLUTIONING

6.1 Feature 1

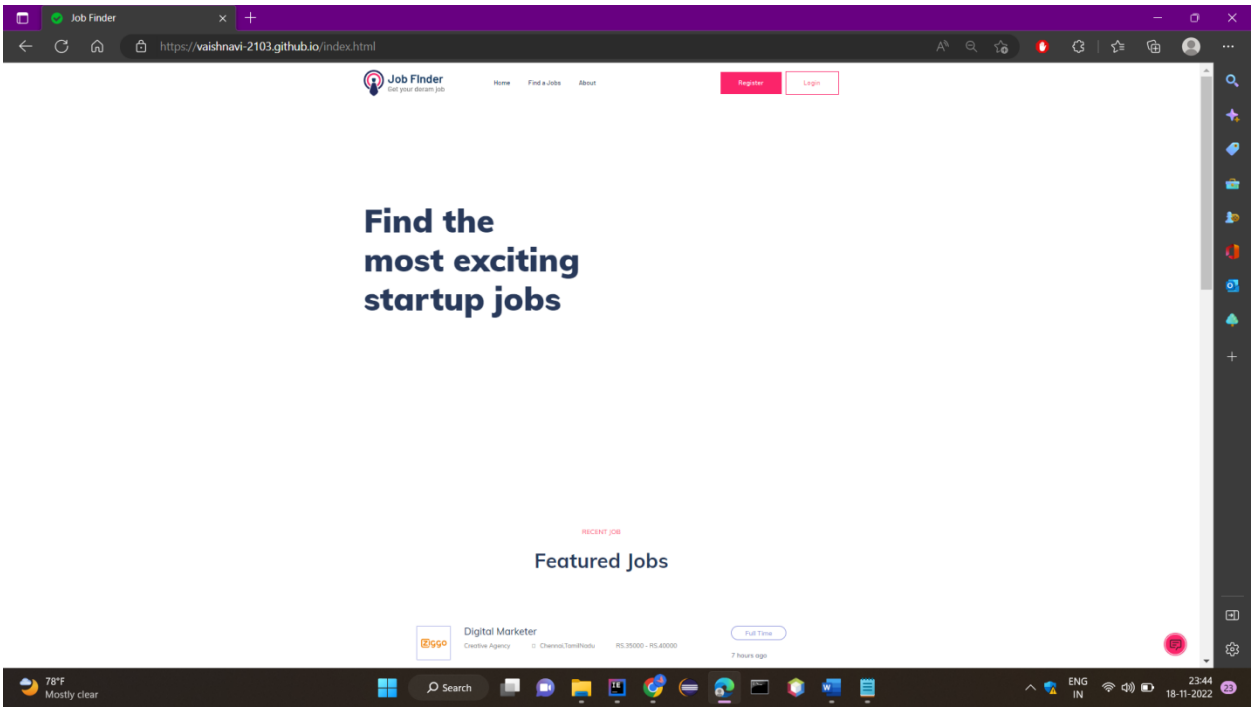


The software has an In-built “Chat Bot” which can help assist with ongoing queries and provide fast and effective solutions to user problems which may occur and also redirect to management attention if need be there any complications the customer service will be available 24*7 to assist in case of any controversial issues arise

6.2 Feature 2

In this project we have created the dashboard page to view the jobs available and to make ease to access the website

- They communicate information quickly.
- They display information clearly and efficiently.
- They show trends and changes in data over time.
- They are easily customizable.
- The most important widgets and data components are effectively presented in a limited space.



7 TESTING

7.1 Test Cases

Software testing is the process of evaluating and verifying that a software product or application does what it is supposed to do. The benefits of testing include preventing bugs, reducing development costs and improving performance.

This Software is tested and evaluated successfully.

7.2 User Acceptance Testing

Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the Inventory Management System project at the time of the release to User Acceptance Testing (UAT)

User Acceptance Testing is carried out in a separate testing environment. A change, an update, or a new feature is requested and developed. Unit and integration tests are run. All seems to be in order. But then, after it is released to the public, serious problems appear. Rework and retesting are not the most expensive consequences when that happens. Loss of reputation is.

8 RESULTS

8.1 Performance Metrics

Based on the two types of user recommendations mentioned above, we analyze the performance of all the techniques mentioned above. The resultant jobs recommended to each new user are then checked with the job that the user is originally in as per the test dataset. If the original user job is recommended in the model result, then the model appends 1 for yes else, it appends 0 for no.

This array of 0's and 1's thus received is then checked for accuracy by computing the count of 1's from the total user predictions

Among all the models made with the incorporation of different similarity metrics, the cosine similarity based job recommendation system model outperformed rest of them all. The metrics used to analyse the model performance are: accuracy, precision, recall and F1-score.This is because cosine considers the existence of duplicate terms while computing similarity.Also, computationally, cosine has low complexity and ease over handling spare data vectors since only non-zero dimensions are considered.

Upon analyzing the result table we observe that the short-comings of some similarity measures upon recommending top 5 and highest-score based job recommendations as even upon achieving high . similarity scores is due to the fact that users are seen to have different jobs than the ones recommended by the models, thus resulting in 6–10% error rates.

9 ADVANTAGES

- The model doesn't need any data about other users, since the recommendations are specific to this user.
- This makes it easier to scale to a large number of users.

- The model can capture the specific interests of a user, and can recommend niche items that very few other users are interested in.

DISADVANTAGES

- Since the feature representation of the items are hand-engineered to some extent,this technique requires a lot of domain knowledge. Therefore, the model can only be as good as the hand-engineered features.
- The model can only make recommendations based on existing interests of the user.
- In other words, the model has limited ability to expand on the users' existing interests

10 CONCLUSION

In this project, Content-Based Filtering and Collaborative Filtering of recommendations have been compared. Additionally, an aggregation plus recommender system has been devised.

Content-Based Filtering recommends the results based on matching the personal preferences of the user with the given document whereas collaborative filtering recommends based on the preferences of fellow users. On evaluating both of these methods, it was concluded that a hybrid system of both of these overcomes the limitations of both of them and increases the efficiency of ranking. Problems of cold start, sparse database, scalability, and lack of trend recommendation have been eliminated. The proposal is to design a Job Recommender system that prioritizes quality over quantity. While there are websites and job listing portals already recommending jobs to job seekers based on their profiles, this research on aggregate quality recommendations has been achieved by crawling selectively, overcoming the limitations. A fully functioning user interface was developed to combine everything together to give the user a seamless experience**.**

11 FUTURE SCOPE

Future works in the case of Personalized Job Recommendation Systems are the utilization of the user-preferred location to get job recommendations based on jobs in

organizations established in nearby areas. This can be done by extracting the latitudes and longitudes of the user-preferred location and computing the euclidean distances between the latitudes and longitudes of the organization location.

This filters out other jobs that fall far from the user-preferred location and gives a more accurate job recommender

As part of the future work, we plan to usefeatures of similar candidates and jobs insequence information. As of now,recommendation using similar candidates an jobs forms part of non-machine learning basedrecommendations and the initial result seempromising. Finally, it would be interesting toextend our methodology to other recommendersystems

12 APPENDIX

Source Code

```
<!DOCtype html>
<html class="no-js" lang="zxx">
   <head>
      <meta charset="utf-8">
      <meta http-equiv="x-ua-compatible" content="ie=edge">
       <title>Job Finder</title>
      <meta name="description" content="">
      <meta name="viewport" content="width=device-width, initial-scale=1">
      <link rel="manifest" href="site.webmanifest">
                  <link rel="shortcut icon" type="image/x-icon" href="http://s3.jp-
tok.cloud-object-storage.appdomain.cloud/jobportalwebsite/assets/img/favicon.ico">
      <link rel="stylesheet" href="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/css/bootstrap.min.css">
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```

```
        <link rel="stylesheet" href="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/css/slicknav.css">
        <link rel="stylesheet" href="http://s3.jp-tok.cloud-object-
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        <link rel="stylesheet" href="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/css/nice-select.css">
        <link rel="stylesheet" href="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/css/style.css">
    <body>

     <header>
        <!-- Header Start -->
       <div class="header-area header-transparrent">
          <div class="headder-top header-sticky">
              <div class="container">
                 <div class="row align-items-center">
                    <div class="col-lg-3 col-md-2">
                       <!-- Logo -->
                       <div class="logo">
                          <a href="index.html"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/logo/logo.png" alt=""></a>
                       </div>
                    </div>
                    <div class="col-lg-9 col-md-9">
                       <div class="menu-wrapper">
                          <!-- Main-menu -->
                          <div class="main-menu">
                             <nav class="d-none d-lg-block">
                                <ul id="navigation">
                                   <li><a href="/index">Home</a></li>
                                   <li><a href="/job_listing">Find a Jobs </a></li>
                                   <li><a href="/about">About</a></li>

                                </ul>
                             </nav>
```

```
                        </div>
                        <!-- Header-btn -->
                        <div class="header-btn d-none f-right d-lg-block">
                            <a href="/registeration" class="btn head-btn1">Register</a>
                            <a href="/login" class="btn head-btn2">Login</a>
                        </div>
                    </div>
                </div>
                <!-- Mobile Menu -->
                <div class="col-12">
                    <div class="mobile_menu d-block d-lg-none"></div>
                </div>
            </div>
        </div>
    </div>
    <!-- Header End -->
</header>
<main>
    <!-- slider Area Start-->
    <div class="slider-area ">
        <!-- Mobile Menu -->
        <div class="slider-active">
            <div class="single-slider slider-height d-flex align-items-center" data-
background="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/hero/h1_hero.jpg">
                <div class="container">
                    <div class="row">
                        <div class="col-xl-6 col-lg-9 col-md-10">
                            <div class="hero__caption">
                                <h1>Find the most exciting startup jobs</h1>
                            </div>
                        </div>
                    </div>


                </div>
            </div>
        </div>
    </div>
    <!-- slider Area End-->
    <!-- Featured_job_start -->
    <section class="featured-job-area feature-padding">
```

```
<div class="container">
   <!-- Section Tittle -->
   <div class="row">
      <div class="col-lg-12">
         <div class="section-tittle text-center">
            <span>Recent Job</span>
            <h2>Featured Jobs</h2>
         </div>
      </div>
   </div>
   <div class="row justify-content-center">
      <div class="col-xl-10">
         <!-- single-job-content -->
         <div class="single-job-items mb-30">
            <div class="job-items">
               <div class="company-img">
                  <a href="#"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/icon/job-list1.png" alt="img"></a>
               </div>
               <div class="job-tittle job-tittle2">
                  <a href="#">
                     <h4>Digital Marketer</h4>
                  </a>
                  <ul>
                     <li>Creative Agency</li>
                     <li><i class="fas fa-map-marker-
alt"></i>Chennai,TamilNadu</li>
                     <li>RS.35000 - RS.40000</li>
                  </ul>
               </div>
            </div>
            <div class="items-link items-link2 f-right">
               <a href="/job_details">Full Time</a>
               <span>7 hours ago</span>
            </div>
         </div>
         <!-- single-job-content -->
         <div class="single-job-items mb-30">
            <div class="job-items">
               <div class="company-img">
                  <a href="#"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/icon/job-list2.png" alt="img"></a>
               </div>
```

```
                        <div class="job-tittle job-tittle2">
                            <a href="#">
                                <h4>Back End Developer</h4>
                            </a>
                            <ul>
                                <li>Mentee Chain</li>
                                <li><i class="fas fa-map-marker-
alt"></i>Chennai,TamilNadu</li>
                                <li>RS.41500 - RS.72000</li>
                            </ul>
                        </div>
                    </div>
                    <div class="items-link items-link2 f-right">
                        <a href="/job_details">Full Time</a>
                        <span>5 hours ago</span>
                    </div>
                </div>
                <!-- single-job-content -->
                <div class="single-job-items mb-30">
                    <div class="job-items">
                        <div class="company-img">
                            <a href="#"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/icon/job-list3.png" alt=""></a>
                        </div>
                        <div class="job-tittle job-tittle2">
                            <a href="#">
                                <h4>SQL Developer</h4>
                            </a>
                            <ul>
                                <li>Sutherland</li>
                                <li><i class="fas fa-map-marker-
alt"></i>Chennai,TamilNadu</li>
                                <li>RS.82500 - RS.44000</li>
                            </ul>
                        </div>
                    </div>
                    <div class="items-link items-link2 f-right">
                        <a href="/job_details">Full Time</a>
                        <span>2 hours ago</span>
                    </div>
                </div>
                <!-- single-job-content -->
                <div class="single-job-items mb-30">
```

```
                    <div class="job-items">
                        <div class="company-img">
                            <a href="#"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/icon/job-list4.png" alt=""></a>
                        </div>
                        <div class="job-tittle job-tittle2">
                            <a href="#">
                                <h4>TIBCO Developer</h4>
                            </a>
                            <ul>
                                <li>Infosys</li>
                                <li><i class="fas fa-map-marker-
alt"></i>Chennai,TamilNadu</li>
                                <li>RS.53500 - RS.40000</li>
                            </ul>
                        </div>
                    </div>
                    <div class="items-link items-link2 f-right">
                        <a href="/job_details">Full Time</a>
                        <span>1 hours ago</span>
                    </div>
                </div>
                <!-- single-job-content -->
                <div class="single-job-items mb-30">
                    <div class="job-items">
                        <div class="company-img">
                            <a href="#"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/icon/job-list1.png" alt=""></a>
                        </div>
                        <div class="job-tittle job-tittle2">
                            <a href="#">
                                <h4>Hadoop Developer</h4>
                            </a>
                            <ul>
                                <li>Capgemini</li>
                                <li><i class="fas fa-map-marker-
alt"></i>Chennai,TamilNadu</li>
                                <li>RS.33500 - RS.24000</li>
                            </ul>
                        </div>
                    </div>
                    <div class="items-link items-link2 f-right">
                        <a href="/job_details">Full Time</a>
```

```
                        <span>3 hours ago</span>
                    </div>
                </div>
                <!-- single-job-content -->
                <div class="single-job-items mb-30">
                    <div class="job-items">
                        <div class="company-img">
                            <a href="#"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/icon/job-list3.png" alt=""></a>
                        </div>
                        <div class="job-tittle job-tittle2">
                            <a href="#">
                                <h4>Full stack Developer</h4>
                            </a>
                            <ul>
                                <li>VCW Limited</li>
                                <li><i class="fas fa-map-marker-
alt"></i>Chennai,TamilNadu</li>
                                <li>RS.45500 - RS.24000</li>
                            </ul>
                        </div>
                    </div>
                    <div class="items-link items-link2 f-right">
                        <a href="/job_details">Full Time</a>
                        <span>4 hours ago</span>
                    </div>
                </div>
                <!-- single-job-content -->
                <div class="single-job-items mb-30">
                    <div class="job-items">
                        <div class="company-img">
                            <a href="#"><img src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/icon/job-list4.png" alt=""></a>
                        </div>
                        <div class="job-tittle job-tittle2">
                            <a href="#">
                                <h4>Senior FinOps Engineer</h4>
                            </a>
                            <ul>
                                <li>WPP</li>
                                <li><i class="fas fa-map-marker-
alt"></i>Chennai,TamilNadu</li>
                                <li>RS.33500 - RS54000</li>
```

```
                        </ul>
                    </div>
                </div>
                <div class="items-link items-link2 f-right">
                    <a href="/job_details">Full Time</a>
                    <span>6 hours ago</span>
                </div>
            </div>
        </div>
    </section>
    <!-- Featured_job_end -->
    <!-- How  Apply Process Start-->
    <div class="apply-process-area apply-bg pt-150 pb-150" data-
background="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/img/gallery/how-applybg.png">
        <div class="container">
            <!-- Section Tittle -->
            <div class="row">
                <div class="col-lg-12">
                    <div class="section-tittle white-text text-center">
                        <span>Apply process</span>
                        <h2> How it works</h2>
                    </div>
                </div>
            </div>
            <!-- Apply Process Caption -->
            <div class="row">
                <div class="col-lg-4 col-md-6">
                    <div class="single-process text-center mb-30">
                        <div class="process-ion">
                            <span class="flaticon-search"></span>
                        </div>
                        <div class="process-cap">
                            <h5>1. Search a job</h5>
                            <p></p>
                        </div>
                    </div>
                </div>
                <div class="col-lg-4 col-md-6">
                    <div class="single-process text-center mb-30">
                        <div class="process-ion">
                            <span class="flaticon-curriculum-vitae"></span>
                        </div>
```

```
                        <div class="process-cap">
                          <h5>2. Apply for job</h5>
                          <p></p>
                        </div>
                      </div>
                    </div>
                    <div class="col-lg-4 col-md-6">
                      <div class="single-process text-center mb-30">
                        <div class="process-ion">
                          <span class="flaticon-tour"></span>
                        </div>
                        <div class="process-cap">
                          <h5>3. Get your job</h5>
                          <p></p>
                        </div>
                      </div>
                    </div>
                  </div>
                </div>
              </div>
              <!-- How  Apply Process End-->

            </main>
            <footer>
              <!-- Footer Start-->
              <div class="footer-area footer-bg footer-padding">
                <div class="container">
                  <div class="row d-flex justify-content-between">
                    <div class="col-xl-3 col-lg-3 col-md-4 col-sm-6">
                      <div class="single-footer-caption mb-50">
                       <div class="single-footer-caption mb-30">
                          <div class="footer-tittle">
                            <h4>About Us</h4>
                            <div class="footer-pera">
                              <p> Connect the world’s professionals to make them more
productive and successful.</p>

                            </div>
                          </div>
                        </div>
                      </div>
                    </div>
                    <div class="col-xl-3 col-lg-3 col-md-4 col-sm-5">
```

```
                    <div class="single-footer-caption mb-50">
                        <div class="footer-tittle">
                            <h4>Contact Info</h4>
                            <ul>
                                <li>
                                    <p>Address :<br>
                                        2, jobfinds  ltd,
                                        <br>
                                        Anna Nagar,
                                        <br>madurai</p>

                                </li>
                                <li><a href="#">Phone : +99999 99999</a></li>
                                <li><a href="#">Email : info@jobfinder.com</a></li>
                            </ul>
                        </div>
                    </div>
                </div>
                <!-- footer-bottom area -->
        <div class="footer-bottom-area footer-bg">
            <div class="container">
                <div class="footer-border">
                    <div class="row d-flex justify-content-between align-items-center">
                        <div class="col-xl-10 col-lg-10 ">
                            <div class="footer-copy-right">
                                <p>
  Copyright &copy;<script>document.write(new Date().getFullYear());</script> All
rights reserved
  </p>
                            </div>
                        </div>

                    </div>
                    </div>
                </div>
            </div>

        </div>
        </div>
        <!-- Footer End-->
    </footer>
<!-- JS here -->
```

```
                <!-- All JS Custom Plugins Link Here here -->
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/vendor/modernizr-
3.5.0.min.js"></script>
                <!-- Jquery, Popper, Bootstrap -->
                <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/vendor/jquery-
1.12.4.min.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/popper.min.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/bootstrap.min.js"></script>
            <!-- Jquery Mobile Menu -->
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/jquery.slicknav.min.js"></script>
                <!-- Jquery Slick , Owl-Carousel Plugins -->
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/owl.carousel.min.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/slick.min.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/price_rangs.js"></script>
                <!-- One Page, Animated-HeadLin -->
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/wow.min.js"></script>
                <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/animated.headline.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/jquery.magnific-popup.js"></script>
                <!-- Scrollup, nice-select, sticky -->
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/jquery.scrollUp.min.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/jquery.nice-select.min.js"></script>
                <script src="./assets/js/jquery.sticky.js"></script>

        <!-- contact js -->
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/contact.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/jquery.form.js"></script>
        <script src="http://s3.jp-tok.cloud-object-
```

```
storage.appdomain.cloud/jobportalwebsite/assets/js/jquery.validate.min.js"></script>
      <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/mail-script.js"></script>
      <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/jquery.ajaxchimp.min.js"></script>

                  <!-- Jquery Plugins, main Jquery -->
      <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/plugins.js"></script>
      <script src="http://s3.jp-tok.cloud-object-
storage.appdomain.cloud/jobportalwebsite/assets/js/main.js"></script>

      <script>
         window.watsonAssistantChatOptions = {
          integrationID: "65c01ed6-9fc1-4883-979a-3676279ebe44", // The ID of this
integration.
          region: "us-south", // The region your integration is hosted in.
          serviceInstanceID: "8fcd017f-a192-420a-aafc-18cb0330efca", // The ID of your
service instance.
          onLoad: function(instance) { instance.render(); }
         };
         setTimeout(function(){
          const t=document.createElement('script');
          t.src="https://web-chat.global.assistant.watson.appdomain.cloud/versions/" +
(window.watsonAssistantChatOptions.clientVersion || 'latest') +
"/WatsonAssistantChatEntry.js";
          document.head.appendChild(t);
         });
        </script>

   </body>
</html>
```

GitHub Link:

https://github.com/IBM-EPBL/IBM-Project-28551-1660113597

Project Demo Link: