INTRODUCTION

PROJECT OVERVIEW:

In the last years, job recommender systems have become popular since they successfully reduce information overload by generating personalized job suggestions. Although in the literature exists a variety of techniques and strategies used as part of job recommender systems, most of them fail to recommending job vacancies that fit properly to the job seekers profiles.

- a) Thus, the contributions of this work are threefold, we 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.
- b) Put forward the proposal of a framework for job recommendation based on professional skills of job seekers.
- c) carried out an evaluation to quantify empirically the recommendation abilities of two state-of-the-art methods, considering different configurations, within the proposed framework.

We thus present a general panorama of job recommendation task aiming to facilitate research and real-world application design regarding this important issue.

Keywords:

Job matching, job seeking, job search, job recommender systems, person-job fit, LinkedIn, word embedding

PURPOSE:

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.

Recommender systems help the users to get personalized recommendations, helps users to take correct decisions in their online transactions, increase sales and redefine the users web browsing experience, retain the customers, enhance their shopping experience.

Here's where recommendation systems come in handy: they shorten the distance between the customer's need and satisfaction. Not only do they help find the search product; they also discover the needs that customers are not even aware they have.

We are primarily used in commercial applications. Examples of such applications include recommending products on Amazon, music on Spotify, and of course, stories on Medium. The famous The Netflix Prize is also a competition in the context of recommendation systems Recommender systems are techniques that serve the best advice for a potential buyer. They suggest the most relevant items to buy and, as a result, increase a company's revenue. These suggestions are based on users' behaviour and history that contain information on their past preferences.

LITERATURE SURVEY

REFERENCE

Adomavicius G, Tuzhilin A (2005). Toward the Next Generation of Recommender Systems: A Survey of the State-of-the-Art and Possible Extensions. IEEE Trans. Knowl. Data Eng. 17(6):734-749.

Barbieri N, Costa G, Manco G, Ortale R (2011). Modeling Item Selection and Relevance for Accurate Recommendations: A Bayesian Approach. In Proceedings of the fifth ACM conference on Recommender systems (RecSys '11), Chicago, Illinois, USA, ACM pp. 21-28.

Keim T (2007). Extending the Applicability of Recommender Systems: A Multilayer Framework for Matching Human Resources. In Proceedings of the 40th Annual Hawaii International Conference on System Sci. (HICSS'07). Hawaii, USA, IEEE

PROBLEM STATEMENT

Problem Statement 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.

We have come up with a new innovation solution through which you can directly choose your job related to your skills without needing help from someone.

User can login into application and search a job otherwise interact with chatbot via entering skills to the bot, it suggests some job based on entered skills and also it updates latest jobs every day, lists of jobs are uploaded into database.

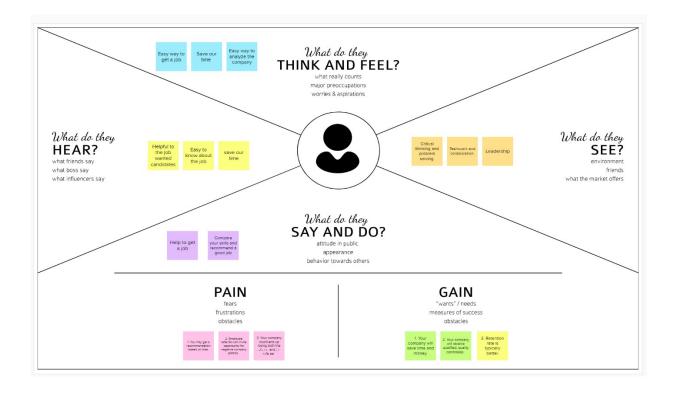
The chatbot also connected with database once user enter skills into chatbot it will search related job in database then it displays various jobs related to skills.

IDEATION AND PROPOSED SOLUTION

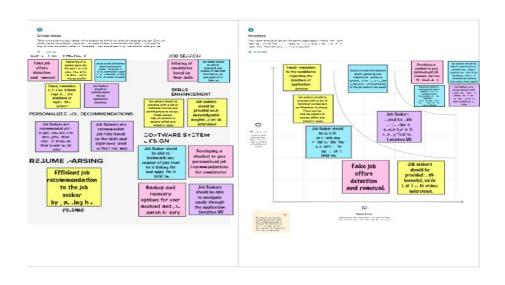
EMPATHY MAP CANVAS

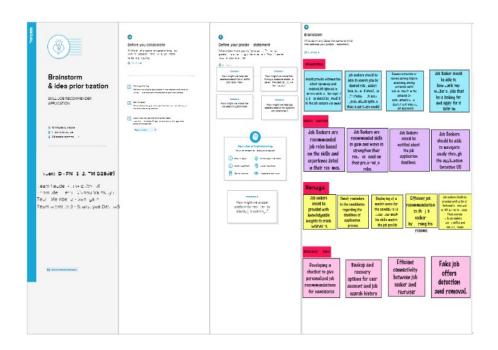
An empathy map is a collaborative tool teams can use to gain a deeper insight into their customers. Much like a user persona, an empathy map can represent a group of users, such as a customer segment.

Objective: To assess the attitudes towards, applicability and usefulness of empathy maps as part of user's satisfaction in finding a job and connecting them with the industries where they are interested in.



IDEATION AND BRAINSTROMING





PROPOSED SOLUTION

S. No	Parameter	Description
1.	Problem Statement (Problem tobe: solved)	Job Recommendation: Recommending the suitable jobs basedon the skills.
2.	Idea / Solution description	We have come up with new innovation solution through which you can directly choose your job related to your skills without need help from someone. You can search a job based on your skills and also chat with chatbot for get recommendation of list of jobs related to specified skillsets. We 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. We can use a job search API toget the current job openings in the market which will fetch the data directly from the webpage. User can login into application and search a job otherwise interact with chatbot via entering skills to the bot, it suggest some job based onentered skills and also it update latest jobs everyday, lists of jobs are uploaded into database and

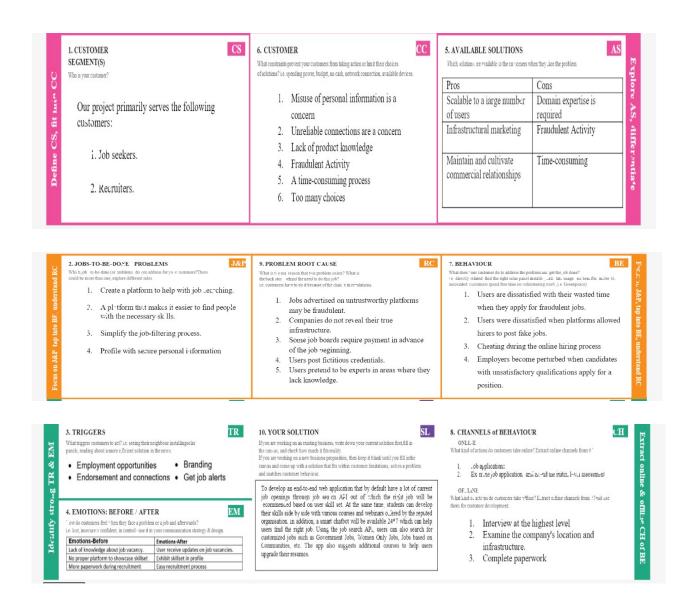
		the chatbot also connected with database once user enter skills into chatbot it will search related job in database then it display various jobs related to skills.
3.	Novelty / Uniqueness	In this application we provide feature for applying a job that recommended by application and multilingual chatbot for user convinience.

4.	Social Impact / Customer Satisfaction	Using this application people can easily find their domain based jobs from top MNC's using AI technology that suits their skill set.
5.	Business Model (RevenueModel)	Revenue can be generated by giving ads in this application and from affiliate commission.
6.	Scalability of the Solution	Skill and job recommender system will provide job recommendations to any kind of skill set.It never fail to show recommendations.

PROBLEM SOLUTION FIT

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem.

This system helps the candidates to search an appropriate job by connecting with the industries and increasing their career growth.



REQUIREMENT ANALYSIS

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.

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.

Non-functional Requirements:

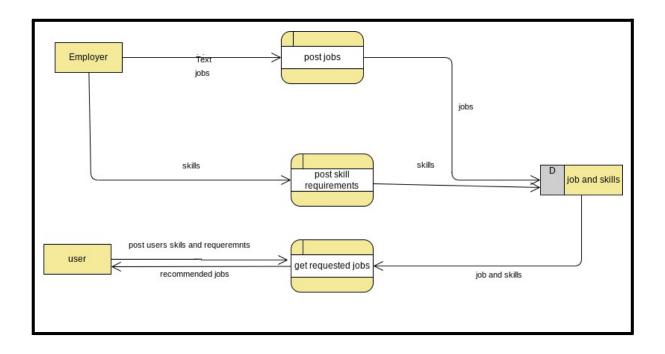
Following are the non-functional requirements of the proposed solution.

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.

PROJECT DESIGN

Dataflow Diagrams

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



SOLUTION AND TECHNICAL ARCHITECTURE

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table

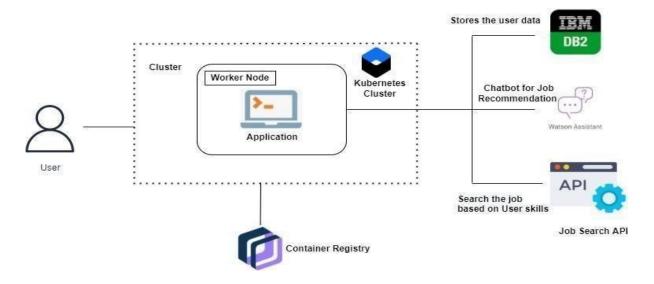


Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user can interacts with our application with the help of chatbot, etc.	HTML, CSS, JavaScript / AngularJs / React Js etc.
2.	Application Logic-1	The User can login with application, by previously he should register in our web app.	Javascript
3.	Application Logic-2	They can also register with the help of a chatbot.	IBM Watson Assistant
4.	Cloud Database	The user data will be stored and retrieved with the help of this database.	IBM DB2, IBM Cloudant etc.
5.	File Storage	The user documents like photos, resumes and much more will be stored in cloud bucket, etc.,	IBM Block Storage or Other Storage Service or Local Filesystem
6.	External API	With the help of API, the user can search the job based on their Skillset.	IBM API, etc.
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description
1.	Is it Scalable?	It follows highly scalable technologies that allows application to handle increase in large user data's workload and perform any operation without any problem.
2.	Is it Modifiable?	It is highly Modifiable and Maintenance requires low cost, compared to other applications.
3.	Is the System Robust?	It does not disturb the performance of the computer by not affecting the operating system. It works in minimal hardware systems.

PROJECT PLANNING & SCHEDULING

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Nivedhitha M Renuga A
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sharanyaa Devi M S Vishnu Varthiny P
Sprint-2		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Nivedhitha M Renuga A
Sprint-3		USN-4	As a user, I can register for the application through Gmail	I can receive confirmation email & click confirm	Medium	Sharanyaa Devi M S Vishnu Varthiny P
Sprint-2	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sharanyaa Devi M S Nivedhitha M
Sprint-2	Dashboard	USN-6	Create a model set that contains those models, then assign it to a role.	Assign that group to the appropriate roles on the Roles page	High	Nivedhitha M Renuga A
Sprint-4	Identity-Aware	USN-7	Open, public access, User-authenticated access, Employee-restricted access.	Company public website. App running on the	High	Sharanyaa Devi M S Vishnu Varthiny P

				company intranet. App with access to customer private information.			
Sprint-1	Communication	USN-8	A customer care executive is a professional responsible for communicating the how's and why's regarding service expectations within a company.	For how to tackle customer queries.		Sharanyaa Devi M Renuga A	S
Sprint-3	Device management	USN-9	You can Delete/Disable/Enable devices in Azure Active Directory but you cannot Add/Remove Users in the directory.	Ease of use.	Medium	Nivedhitha Vishnu Varthiny P	M

CODING & SOLUTIONING

FEATURES 1:

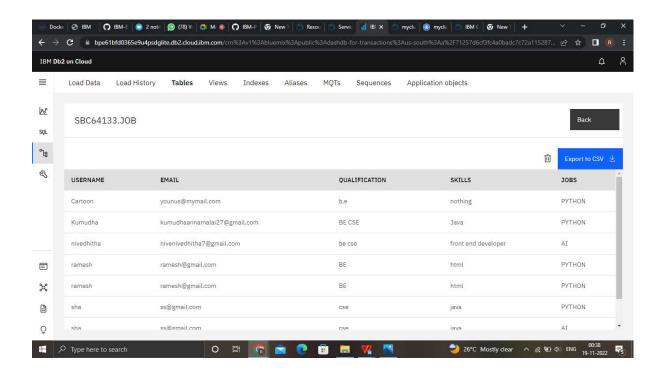
- 1.Creating an HTML file
- 2. Converted to a python file using flask.
- 3. Connecting IBM database using the python file.
- 4.Creating a Dockerfile

FEATURE 2

- 1. Converting the python files to image using Docker Hub.
- 2. Pushing the images to the container registery.
- 3. With the help of the Kubernetes Node Port number is obtained
- 4. Web application can be accessed from anywhere.

DATASCHEMA

- 1.User Name
- 2.Email Id
- 3.Password
- 4. Qualifications
- 5.Skills
- 6.Domain



TEST CASES

				Date Team ID	18-Nov-22 PNT2022TMID28689							
				Project Name Maximum Marks	Project - Skillijdb Recommender Application 4 marks.							
Testcase D	Feature Type	Component	Test Scenario	Pre-Requisite	Steps ToExecute	Test Data	Expected Result	Actual Result	Statu	Comments	TCfor Automation(f/N) BUG D	Executed By
Homepage_TC_001	u	Home Page	Verify user is able to see the UI elements in the homepage		s.Enter LRL and click go s.Choose login or register button	http://159.122. 187.112-32467/	HomePage should bedisplayed.	Working as expected	Pass		N	Nivethitha M Sharanyaa Davi M S
Homepage_TC_002	functional	Register page	Verify the user is able to give the credentials to login		Senter URL and click go The user should be able to give Ally valid user name And user name And user name And user name And user name	http://190.122.187.112:324670 register	Application should show below elements: a jinter a user name bijinter a email cjilmer a password	Working as expected	Pass		N	Renuga A Vishnu Varthiny P
Homepage_TC_003	functional	Login page	Verify user is able to enter the registere d Use mane and the password		1.Enter URL and click go 2.Enter the Username 3.Enter the password 4.Enter the loginbutton	http://159.122. 187.112:13467/ login	Application should show the Jobs available	Working a sexpected	Pass		N	Sharanyaa Devi M S Ranuga A
Homepage_TC_004	functional	Available jobs page	Verify user able to apply the selective jobs		1. Enter URL and click go 2. Click on Choose but ton 3. Click on Apply now	http://159.122. 187.112-31467/ apply	Application should be able to extract the information from the user for applying a job	Working as expected	Pass		N	Nivedhitha M Vishnu Varthiny P
chafted_1C_005	Rectaul	Charbo	Verfy can is affect to communitate with the chastic of the chastic		Lither Will and doig a 2.Cick on Cheese July 2.Cick on Cheese July 3.Cick on Cheese July 4.Cick on Cheese July 4.Cick on Cheese July 5.Cick on Cheese 5.Cick on	http://dis.122. 187.112:30469	The usernate he alsh to have a server and the server with the first her user pets a dear tide at the process of with the pib auroth to process of with the pib auroth.	Working as expected	Pass		×	Sharanyas Desi M S Birnuga A

USER ACCEPTANCE TESTING

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the [ProductName] project at the time of the release to User Acceptance Testing (UAT).

2. Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

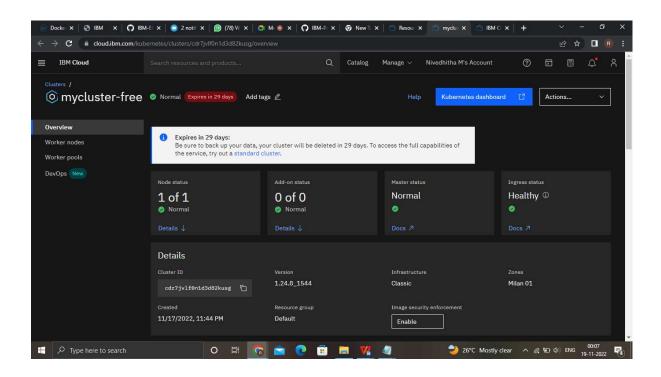
Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtota
By Design	0	0	0	0	0
Duplicate	0	0	0	0	0
External	0	0	0	0	0
Fixed	0	0	0	0	0
Not Reproduced	0	0	0	0	0
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	0	0	0	0	0

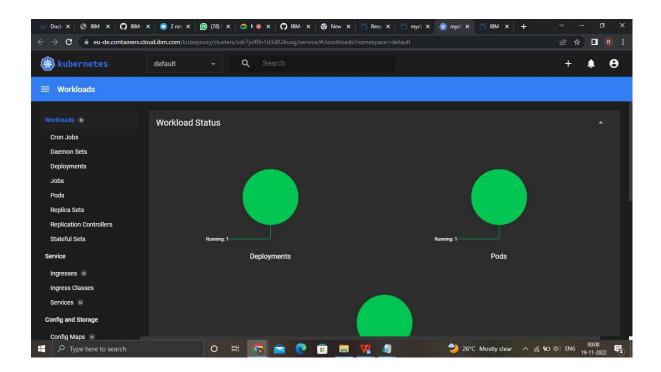
3. Test Case Analysis

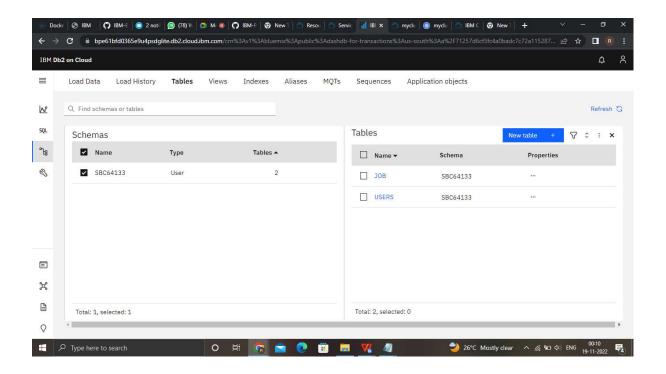
This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	NotTested	Fail	Pass
Section	Total Cases	Not resteu	raii	1 43.
Client Application	5	0	0	5
Security	5	0	0	5
Final Report Output	5	0	0	5
Performance	5	0	0	5

PERFORMANCE METRIC







ADVANTAGES AND DISADVANTAGES

Advantages

It can speak volumes for a candidate-in-question when they are referred by an existing employee. Not only will the current employee, the referrer, likely want to add to—and not detract from company cultures, but they'll also vouch for required skillsets and competencies.

Help evaluate your employees' competency profile against those required for their jobs and identify gaps for improvement. This data can be used to create personalized development plans that map your employees' paths within the organization.

This encourages a substantial interest in specific research fields and technologies that could benefit the managing of this information overload. The most important fields are Information retrieval and Information filtering. Information retrieval deals with automatically matching user's information and Information filtering aims to assist users eliminating unwanted information

Disadvantages

The biggest disadvantage of Job Analysis process is that it is very time consuming. It is a major limitation especially when jobs change frequently.

If the observer or job analyst is an employee of the same organization, the process may involve his or her personal likes and dislikes. This is a major hindrance in collecting genuine and accurate data.

Because of small sample size, the source of collecting data is extremely small. Therefore, information collected from few individuals needs to be standardized.

The process involves lots of human efforts. As every job carries different information and there is no set pattern, customized information is to be collected for different jobs. The process needs to be conducted separately for collecting and recording job-related data.

CONCLUSION

The system gives a clear vision of recruiting process and the job recommendation researches. We have seen from our literature review and from the challenges that faced the holistic e-recruiting platforms, an increased need for enhancing the quality of candidates/job matching.

The recommender system technologies accomplished significant success in a broad range of applications and potentially a powerful searching and recommending techniques. Consequently, there is a great opportunity for applying these technologies in recruitment environment to improve the matching quality.

This report shows that several approaches for job recommendation have been proposed, and many techniques combined in order to produce the best fit between jobs and candidates. We presented state of the art of job recommendation as well as, a comparative study for its approaches that proposed by literatures. Additionally, we reviewed typical recommender system techniques and the recruiting process related issues.

We conclude that the field of job recommendations is still unripe and require further improvements. As part of our ongoing research, we aim to build a new recommendation approach and test with real data for employee and staffing data from large companies.

FUTURE SCOPE

The tremendous growth of both information and usage has led to a socalled information overload problem in which users are finding it increasingly difficult to locate the right information at the right time Thus huge amount of information and easy access to it make recommender systems unavoidable [1]. We use recommender system every day without realizing it and without knowing what exactly happens.

Recommender systems have changed the way people find products, information, and even other people. They study patterns of behaviour to know what someone will prefer from among a collection of things he/she has never experienced. Benefits of recommender systems to the businesses using them include: The ability to offer unique personalized service for the customer, Increase trust and customer loyalty, Increase sales, click-through rates, conversions, etc., Opportunities for promotion, persuasion and Obtain more knowledge about customers.

Recommender systems are software tools and techniques providing suggestions for items to be of use to a user. Job recommender systems are desired to attain a high level of accuracy while making the predictions which are relevant to the customer, as it becomes a very tedious task to explore thousands of jobs, posted on the web.

APPENDIX

```
SOURCECODE
      HOME PAGE
      <!DOCTYPE html>
      <html lang="en">
      <head>
       <title>Bootstrap Example</title>
       <meta charset="utf-8">
       <meta name="viewport" content="width=device-width, initial-scale=1">
       k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
       <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
       <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
      </head>
      <style>
      .right{
           position: absolute;
           right: 34px;
           top: 10px;
      display: inline-block;
       }
       .formwork{
       color:blue;
       }
       .container h5{
      font-size: 50px;
```

```
font-family: 'Baloo Bhai 2';
      }
      .btn{
          font-family: 'Baloo Bhai 2', cursive;
          margin: 0px 9px;
          background-color: rgb(234, 128, 15);
          color: white;
          text-align:center;
      .navbar li a{
      font-family: 'Baloo Bhai 2', cursive;
      color: rgb(197, 35, 35);
          }
      .container u{
      color:rgb(18, 231, 142);
      }
        </style>
      <br/>
<br/>
body style="background-
image:url('https://images.pexels.com/photos/1242348/pexels-photo-
1242348.jpeg?w=2000');">
      <nav class="navbar navbar-inverse">
       <div class="container-fluid">
        <a href="/">HOME</a>
         <a href="/register">REGISTER</a>
         <a href="/login">LOGIN</a>
         <a href="/about">ABOUT US</a>
```

color:rgb(0, 0, 0);

```
</div>
      </nav>
      <div class="right">
      <form action="/contact" method="get" target=" blank">
           <button class="btn">contact us</button>
         </form>
      </div>
      <div class="container">
          <center><u><h5>JOB PORTAL<h5></u></center>
        </div>
        <br>
      <!-- bootstrap navbar -->
           <nav class="navbar sticky-top navbar-expand-lg navbar-dark">
             <div class="container-fluid">
              <a class="main-logo-img mt-3" href="#"><img src="" alt=""
height="0px" width="0px">
               <!-- <a class="navbar-brand" href="index.html">JobPortal</a> -->
              </a>
           <section class="our-focus">
             <div class="container">
              <center><h1 class="text-center mt-3">.....ABOUT US.....</h1></center>
      <br>
      <hr>
              <div class="row ml-3 mt-3">
               <div class="col-lg-3 mr-5" id="focus-first">
                <div class="card" style="width: 19rem;">
                 <!-- <img src="assets/img/home kids.jpg" class="card-img-top"
alt="..."> -->
                 <div class="card-body">
```

<h5 class="card-title">MISSION</h5>

Job recommender is an application that builds a relation between the candidates and the organisation.

The outcome will be the recommendations based on what domains and the fields that the candidates are intrested.

This system work in areas like search queries, hashtags and more. We have integrated with IBM cloud and used some technologies like python, Docker and more.

```
</div>
</div>
</div>
</div></b>
</b>
</div class="col-lg-3 mr-5" id="focus-second">

<div class="card" style="width: 20rem;">

<!-- <img src="assets/img/friendship day.JPG" class="card-img-top" alt="..."> -->

<div class="card-body">

<h5 class="card-title">VISSION</h5>
```

Our main objective is to recommend
appropriate jobs for the users and satisfy

their needs by asking them various questions based on the induvidual's interest on domain, salary pakage, area of interest and the skills the are filled with.

With this the young talents will be able to find a job and start a career.It will also support the working employees to develope in their career.

```
</div>
</div>
</div></b>
</b>
<b><div class="col-lg-3 ml-5" id="focus-third">
<div class="card" style="width: 20rem;">
<!-- <img src="assets/img/health camp.jpg" class="card-img-top"
alt="...">-->
```

```
<div class="card-body">
                   <h5 class="card-title">OBJECTIVE</h5>
                   Well directed career guidance for the
employees and the freshers; expand employment accross the world;
                    identify a perfect candidate for a specific job role; to increase the
current industry standards; to make the candidates fly through the employment.
                  </div>
                </div>
               </div>
              </div>
             </div></b>
            </section>
            <!-- focus section ends -->
           <!-- footer starts -->
            <!-- Site footer -->
            <script>
       window.watsonAssistantChatOptions = {
         integrationID: "db02aed9-1627-4889-b8c4-5cf30e7ab189", // The ID of this
integration.
         region: "au-syd", // The region your integration is hosted in.
         serviceInstanceID: "36d66a11-498c-4821-a1a1-6008bddc50e5", // 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>
```

REGISTER PAGE

```
<!DOCTYPE html>
<html lang="en">
<head>
 <title>Bootstrap Example</title>
 <meta charset="utf-8">
 <meta name="viewport" content="width=device-width, initial-scale=1">
 k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
 <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
 <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
</head>
<style>
.right{
    position: absolute;
    right: 34px;
    top: 10px;
display: inline-block;
}
.formwork{
color:green;
```

```
}
.container h5{
font-size: 50px;
color:black;
font-family: 'Baloo Bhai 2';
}
.btn{
    font-family: 'Baloo Bhai 2', cursive;
    margin: 0px 9px;
    background-color: rgb(214, 28, 108);
    color: rgb(0, 0, 0);
    text-align:center;
    }
.navbar li a{
font-family: 'Baloo Bhai 2', cursive;
color: red;
    }
.container u{
color:green;
}
  </style>
<br/><body style="background-image:url('https://images.pexels.com/photos/1242348/pexels-
photo-1242348.jpeg?w=2000');">
<nav class="navbar navbar-inverse">
 <div class="container-fluid">
  <a href="/">HOME</a>
   <a href="/register">REGISTER</a>
   <a href="/login">LOGIN</a>
```

```
<a href="/about">ABOUT US</a>
  </div>
</nav>
<div class="right">
<form action="/contact" method="get" target=" blank">
    <button class="btn">contact us</button>
   </form>
</div>
  <!-- bootstrap navbar -->
  <div class="logo mt-3 text-center">
    <a class="main-logo-img mt-5" href="#"><img
src="https://thumbs.dreamstime.com/b/round-181587919.jpg" alt="sheep-logo"
height="120px" width="300px">
      <!-- <a class="navbar-brand" href="index.html">JobPortal</a> -->
     </a>
  </div>
   <!-- navbar ends -->
  <!-- Login form -->
  <div class="login text-center mt-5">
    <h2> REGISTER NOW </h2>
<br>
    <form action="/register" method="post">
    <div class="msg"></div>
      <!-- <input type="text" placeholder="fullname" id="fullname"> </br></br>
      <input type="text" name="username" placeholder="Enter Your Username"</pre>
id="username" required></br>
                   <input type="email" name="email" placeholder="Enter Your</pre>
Email ID" id="email" required></br>
                   <input type="password" name="password" placeholder="Enter</pre>
Your Password" id="password" required></br>
```

```
</br>
    <button type="submit" id="button" class="btn btn-primary"> Register </button>
    </form>
  </div>
<br>
  <div class="note mt-3 text-center"> <!--Register form -->
   already have an account ? please login <a href="/login">login! </a> 
  </div>
       <script>
 window.watsonAssistantChatOptions = {
  integrationID: "db02aed9-1627-4889-b8c4-5cf30e7ab189", // The ID of this
integration.
  region: "au-syd", // The region your integration is hosted in.
  serviceInstanceID: "36d66a11-498c-4821-a1a1-6008bddc50e5", // 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>
LOGIN PAGE
```

<!DOCTYPE html>

```
<html lang="en">
<head>
 <title>Bootstrap Example</title>
 <meta charset="utf-8">
 <meta name="viewport" content="width=device-width, initial-scale=1">
 k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
 <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
 <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
</head>
<style>
.right{
    position: absolute;
    right: 34px;
    top: 10px;
display: inline-block;
}
.formwork{
color:green;
}
.container h5{
font-size: 50px;
color:black;
font-family: 'Baloo Bhai 2';
}
.btn{
```

```
font-family: 'Baloo Bhai 2', cursive;
    margin: 0px 9px;
    background-color: blue;
    color: white;
    text-align:center;
    }
.navbar li a{
font-family: 'Baloo Bhai 2', cursive;
color: red;
.container u{
color:green;
}
  </style>
<br/><body style="background-image:url('https://images.pexels.com/photos/1242348/pexels-
photo-1242348.jpeg?w=2000');">
<nav class="navbar navbar-inverse">
 <div class="container-fluid">
  <a href="/">HOME</a>
   <a href="/register">REGISTER</a>
   <a href="/login">LOGIN</a>
   <a href="/about">ABOUT US</a>
  </div>
</nav>
<div class="right">
<form action="/contact" method="get" target=" blank">
    <button class="btn">contact us</button>
   </form>
```

```
</div>
  <!-- bootstrap navbar -->
  <div class="logo mt-3 text-center">
    <a class="main-logo-img mt-5" href="#"><img
src="https://cengage.force.com/resource/1607465003000/loginIcon" height="150px"
width="250px">
      <!-- <a class="navbar-brand" href="home.html">JobPortal</a> -->
     </a>>
  </div>
   <!-- navbar ends -->
  <!-- Login form -->
  <div class="login text-center mt-5">
    <u><h2> LOGIN FORM </h2></u>
<br>
    <form action="/login" method="post">
    <div class="msg"><b> WELCOME TO THE LOGIN PAGE </b></div>
<br>
      <input type="text" name="username" placeholder="Enter Your Username"</pre>
id="username" required></br>
                   <input type="password" name="password" placeholder="Enter</pre>
Your Password" id="password" required></br>
      </br>
    <button type="submit" id="button" class="btn btn-primary"> Login </button>
    </form>
  </div>
<br>
  <div class="note mt-3 text-center"> <!--Register form -->
  > Don't have an account yet? Click here to <a href="/register">register! </a> 
  </div>
       <script>
 window.watsonAssistantChatOptions = {
```

```
integrationID: "db02aed9-1627-4889-b8c4-5cf30e7ab189", // The ID of this
integration.
  region: "au-syd", // The region your integration is hosted in.
  serviceInstanceID: "36d66a11-498c-4821-a1a1-6008bddc50e5", // 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>
DASHBOARD
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JOBPORTAL | HOME</title>
  <meta charset="UTF-8">
    <!-- favicon -->
    <!-- <li>-- !-- -- rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-
icon"> -->
    <!-- <li>-- -- rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
```

```
link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
    <!-- bootstrap css cdn -->
    k rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z
" crossorigin="anonymous">
    k rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="css/style.css">
    <!-- font styles cdn -->
    k rel="preconnect" href="https://fonts.gstatic.com">
    k href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
    link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<br/><body style="background-image: url('https://images.pexels.com/photos/684314/pexels-
photo-684314.jpeg?auto=compress&cs=tinysrgb&w=2000');">
    <!-- bootstrap navbar -->
    <nav class="navbar sticky-top navbar-expand-lg navbar-light">
      <div class="container-fluid">
       <a class="main-logo-img mt-3" href="#"><img src="https://encrypted-</pre>
tbn0.gstatic.com/images?q=tbn:ANd9GcOJYlncUWMljmSKPkZLKJS5P0VOJhZFwj
KbZQ&usqp=CAU" alt="sheep-logo" height="120px" width="300px">
        <!-- <a class="navbar-brand" href="index.html">JobPortal</a> -->
       </a>>
       <button class="navbar-toggler" type="button" data-bs-toggle="collapse"</pre>
data-bs-target="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle
navigation">
        <span class="navbar-toggler-icon"></span>
       </button>
```

```
<div class="row donate-sponsor">
        <a type="button" class="btn btn-primary mr-1" id="sponsor"
href="/display">DISPLAY</a>
                          <a type="button" class="btn btn-primary mr-1"
id="sponsor" href="/logout">LOG OUT</a>
       </div>
      </div>
     </nav>
     <!-- navbar ends -->
    <!-- what we focus on -->
    <section class="our-focus">
      <div class="container">
       <h2 class="text-center mt-3">Available Jobs</h2>
       <div class="row ml-3 mt-3">
        <div class="col-lg-3 mr-5" id="focus-first">
         <div class="card" style="width: 19rem;">
          <!-- <img src="assets/img/home kids.jpg" class="card-img-top" alt="..."> -
->
          <div class="card-body">
           <h5 class="card-title">Front End Developer</h5>
           Skills for Front End Developer
           <a href="apply" class="btn btn-primary">Apply Now</a>
          </div>
         </div>
        </div>
        <div class="col-lg-3 mr-5" id="focus-second">
         <div class="card" style="width: 20rem;">
          <!-- <img src="assets/img/friendship day.JPG" class="card-img-top"
alt="..."> -->
```

```
<div class="card-body">
           <h5 class="card-title">Data Scientist</h5>
           Skills for datascientist
            <a href="apply" class="btn btn-primary">Apply Now</a>
          </div>
         </div>
        </div>
        <div class="col-lg-3 ml-5" id="focus-third">
         <div class="card" style="width: 20rem;">
          <!-- <img src="assets/img/health camp.jpg" class="card-img-top" alt="...">
-->
          <div class="card-body">
           <h5 class="card-title">HR Manager</h5>
           skills for hr manager
            <a href="apply" class="btn btn-primary">Apply Now</a>
          </div>
         </div>
        </div>
       </div>
      </div>
     </section>
     <!-- focus section ends -->
    <!-- footer starts -->
     <!-- Site footer -->
 <script>
 window.watsonAssistantChatOptions = {
  integrationID: "db02aed9-1627-4889-b8c4-5cf30e7ab189", // The ID of this
integration.
  region: "au-syd", // The region your integration is hosted in.
```

```
serviceInstanceID: "36d66a11-498c-4821-a1a1-6008bddc50e5", // 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>
APPLY PAGE
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JOBPORTAL | APPLY</title>
    <!-- favicon -->
    <!-- <li>-- !-- -- rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-
icon"> -->
    <!-- <li>-- -- rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
    link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
    <!-- bootstrap css cdn -->
    k rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
```

```
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z
" crossorigin="anonymous">
    k rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="css/style.css">
    <!-- font styles cdn -->
    k rel="preconnect" href="https://fonts.gstatic.com">
    k href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
    link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<br/><body style="background-image: url('https://images.pexels.com/photos/1242348/pexels-
photo-1242348.jpeg?w=2000');">
  <!-- bootstrap navbar -->
  <div class="logo mt-3 text-center">
    <a class="main-logo-img mt-5" href="#"><img src="https://encrypted-
tbn0.gstatic.com/images?q=tbn:ANd9GcTkh2hL43fgGUX0V0cA-
2W7lAIqbm10hE 7yg&usqp=CAU&reload=on" alt="" height="150px"
width="400px">
      <!-- <a class="navbar-brand" href="home.html">JobPortal</a> -->
     </a>
  </div>
   <!-- navbar ends -->
  <!-- Login form -->
  <div class="login text-center mt-5">
    <h2>Apply Now</h2>
    <div class="msg"></div>
    <form action="/apply" method="post" class="mt-3">
      <!-- <input type="text" placeholder="fullname" id="fullname"> </br></br>
      <input type="text" name="username" placeholder="Enter Your Username"</pre>
id="username" required></br>
```

```
<input type="email" name="email" placeholder="Enter Your email"</pre>
id="email" required></br>
      <input type="text" name="qualification" placeholder="Enter Your</pre>
Qualification" id="qualification" required></br>
                   <input type="text" name="skills" placeholder="Enter Your</pre>
skills" id="skills" required></br>
       <select name ="s">
<option value ="PYTHON">front end Developer
<option value ="ML"> ML</option>
<option value ="AI"> AI</option>
</select>
      </br>
    <button type="submit" id="button" class="btn btn-primary"> Submit</button>
    </form>
  </div>
<div class="note mt-3 text-center">
  click here to go to dashboard <a href="/dashboard">Dashboard! </a> 
  </div>
       <script>
 window.watsonAssistantChatOptions = {
  integrationID: "db02aed9-1627-4889-b8c4-5cf30e7ab189", // The ID of this
integration.
  region: "au-syd", // The region your integration is hosted in.
  serviceInstanceID: "36d66a11-498c-4821-a1a1-6008bddc50e5", // 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>
DISPLAY PAGE
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JOBPORTAL | HOME</title>
   <!-- <div class="msg">{{ msg }}</div> -->
  <meta charset="UTF-8">
    <!-- favicon -->
    <!-- <li>-- !-- -- rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-
icon"> -->
    <!-- <li>--> ink rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
    k rel="icon" type="/image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
    <!-- bootstrap css cdn -->
    k rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z
" crossorigin="anonymous">
```

```
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-</pre>
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="style.css">
    <!-- font styles cdn -->
    k rel="preconnect" href="https://fonts.gstatic.com">
    k href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
    link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
             <style>
table, th, td, tr, thead{
 border:5px solid black;
}
</style>
</head>
<body style="background-image:url('https://img.freepik.com/premium-
photo/magnifying-glass-blue-background-wallpaper-copy-space-symbol-decoration-
ornament-hr-human-recruitment-research-discovery-work-job-career-resume-
interview-hiring-employment-choice-focus3d-render 178037-844.jpg?w=1800');">
    <!-- bootstrap navbar -->
    <nav class="navbar sticky-top navbar-expand-lg navbar-light">
      <div class="container-fluid">
       <a class="main-logo-img mt-3" href="#"><img src="" alt="">
         <!-- <a class="navbar-brand" href="index.html">JobPortal</a> -->
       </a>
       <button class="navbar-toggler" type="button" data-bs-toggle="collapse"</pre>
data-bs-target="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle
navigation">
         <span class="navbar-toggler-icon"></span>
       </button>
```

```
<div class="row donate-sponsor">
      <a type="button" class="btn btn-success mr-1" id="donate"
href="/logout">LOGOUT</a>
      <a type="button" class="btn btn-warning mr-1" id="sponsor"
href="register">REGISTER</a>
     </div>
    </div>
   </nav>
   <!-- navbar ends -->
   <!-- what we focus on -->
   <div class="m-4 container">
   <h1><u>Your Details</u></h1>
  </div>
  <div class="m-4 container">
   <thead>
       Sr.No
        Username
        Emailid
        Qualification
        Skills
        Jobs
       </thead>
     {% for row in account %}
```

```
{{loop.index}}
          {{row[0]}}
          {{row[1]}}
          {{row[2]}}
          {{row[3]}}
          {{row[4]}}
        {% endfor %}
      </div>
</body>
</html>
CONTACT PAGE
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
</head>
<style>
.h1{
```

```
color:blue;
font-family: 'Baloo Bhai 2';
}
.right{
    position: absolute;
    right: 34px;
    top: 10px;
display: inline-block;
}
. formwork \{\\
color:green;
}
.container h5{
font-size: 50px;
color:black;
font-family: 'Baloo Bhai 2';
}
.btn{
    font-family: 'Baloo Bhai 2', cursive;
    margin: 0px 9px;
    background-color: blue;
    color: white;
    text-align:center;
    }
.navbar li a{
font-family: 'Baloo Bhai 2', cursive;
color: red;
```

```
}
.container u{
color:green;
}
 </style>
<br/><body style="background-image:url('https://images.pexels.com/photos/1242348/pexels-
photo-1242348.jpeg?w=2000');">
<nav class="navbar navbar-inverse">
<div class="container-fluid">
 <a href="/">HOME</a>
  <a href="/register">REGISTER</a>
  <a href="/login">LOGIN</a>
  <a href="/about">ABOUT US</a>
 </div>
</nav>
<footer class="site-footer">
     <b><div class="container mt-5">
      <div class="row">
       <div class="col-sm-12 col-md-6">
        <h3>JOB PORTAL</h3>
```

Contact us to simplify your job search with the our job recommender system.

Connect with the world's widespread industries and on a professional system.

Build a bridge with others from your industry on a good professional network. Apply for jobs, upskill in your area. Find & Apply To New Jobs

and enjoy your career with highest upscales and development with our Skills/job recommender system. Find the job you need and easily apply for the jobs you want.

</div>

```
<h4>Get in Touch</h4>
         <a href="mailto:test@gmail.com">jobportal@gmail.com</a>
          <a href="">+91 90000000</a>
         </div>
       </div>
      <hr>
       </div>
     </div></b>
   </footer>
        <script>
 window.watsonAssistantChatOptions = {
  integrationID: "db02aed9-1627-4889-b8c4-5cf30e7ab189", // The ID of this
integration.
  region: "au-syd", // The region your integration is hosted in.
  serviceInstanceID: "36d66a11-498c-4821-a1a1-6008bddc50e5", // 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";
```

<div class="col-xs-6 col-md-3">

```
document.head.appendChild(t);
});
</script>
       </body>
</html>
ABOUT PAGE
      <html lang="en">
      <head>
       <title>Bootstrap Example</title>
       <meta charset="utf-8">
       <meta name="viewport" content="width=device-width, initial-scale=1">
       k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
       <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>
       <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
      </head>
      <style>
      .text-center mt-3 h1{
      color:blue;
      font-family: 'Baloo Bhai 2';
      }
      .h1{
      color:blue;
      font-family: 'Baloo Bhai 2';
      }
      .right{
```

```
position: absolute;
    right: 34px;
    top: 10px;
display: inline-block;
}
.formwork{
color:green;
}
.container h5{
font-size: 50px;
color:black;
font-family: 'Baloo Bhai 2';
}
.btn{
    font-family: 'Baloo Bhai 2', cursive;
    margin: 0px 9px;
    background-color: blue;
    color: white;
    text-align:center;
    }
.navbar li a{
font-family: 'Baloo Bhai 2', cursive;
color: red;
    }
.container u{
color:green;
}
```

```
</style>
     <br/>
<br/>
body style="background-
image:url('https://images.pexels.com/photos/1242348/pexels-photo-
1242348.jpeg?w=2000');">
     <nav class="navbar navbar-inverse">
      <div class="container-fluid">
       <a href="/">HOME</a>
        <a href="/register">REGISTER</a>
        <a href="/login">LOGIN</a>
        <a href="/about">ABOUT US</a>
       </div>
     </nav>
     <div>
            <center><h1 class="text-center mt-3">ABOUT US</h1></center>
                        </div>
     <br>
     <br>
            <center><div class="row ml-3 mt-3">
             <b><div class="col-lg-3 mr-3" id="focus-first">
              <div class="card" style="width: 19rem;">
               <!-- <img src="assets/img/home kids.jpg" class="card-img-top"
alt="..."> -->
               <div class="card-body">
                <u><h5 class="card-title">MISSION</h5></u>
     <br>
```

Job recommender is an application that
builds a relation between the candidates and the organisation.

The outcome will be the recommendations based on what domains and the fields that the candidates are intrested.

This system work in areas like search queries, hashtags and more. We have integrated with IBM cloud and used some technologies like python, Docker and more..

```
</div>
</div>
</div>
</div></b>
<b><div class="col-lg-4 mr-4" id="focus-second">
<div class="card" style="width: 20rem;">
<!-- <img src="assets/img/friendship day.JPG" class="card-img-top" alt="..."> -->
<div class="card-body">
<div class="card-body">
<u><h5 class="card-title">VISSION</h5></u>
```

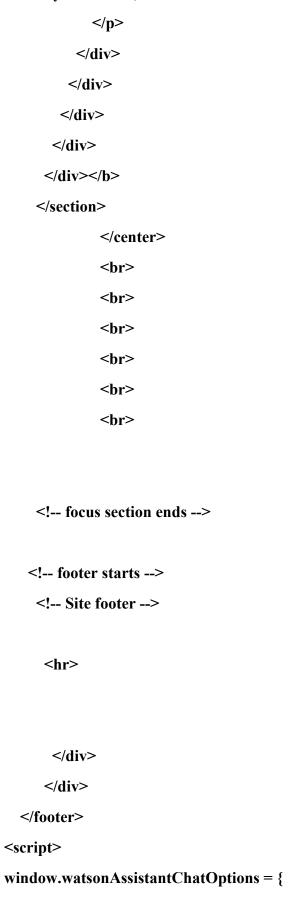
their needs by asking them various questions based on the induvidual's interest on domain, salary pakage, area of interest and the skills the are filled with.

With this the young talents will be able to find a job and start a career. It will also support the working employees to develope in their career.

```
</div>
</div>
</div>
</div></b>
</br>
<br/>
<br/>
<div class="col-lg-4 ml-4" id="focus-third">
<div class="card" style="width:20rem;">
<!-- <img src="assets/img/health camp.jpg" class="card-img-top"
<div class="card-body">
<div class="card-body">
<u><h5 class="card-title">OBJECTIVE</h5></u>
Well directed career guidance for the
```

employees and the freshers; expand employment accross the world;

identify a perfect candidate for a specific job role; to increase the current industry standards; to make the candidates fly through the employment.



```
integrationID: "db02aed9-1627-4889-b8c4-5cf30e7ab189", // The ID of this
integration.
         region: "au-syd", // The region your integration is hosted in.
         serviceInstanceID: "36d66a11-498c-4821-a1a1-6008bddc50e5", // 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-50271-1660901567