PROJECT REPORT

IBM-Project-25987-1659978781

TITLE:

Skill / Job Recommender Application

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TEAM ID:

PNT2022TMID16271

1 INTRODUCTION

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 openingsbased on the user skillset.

The user and their information are stored in the Database. An alert is sent when there is anopening 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 fetchthe data directly from the webpage

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.
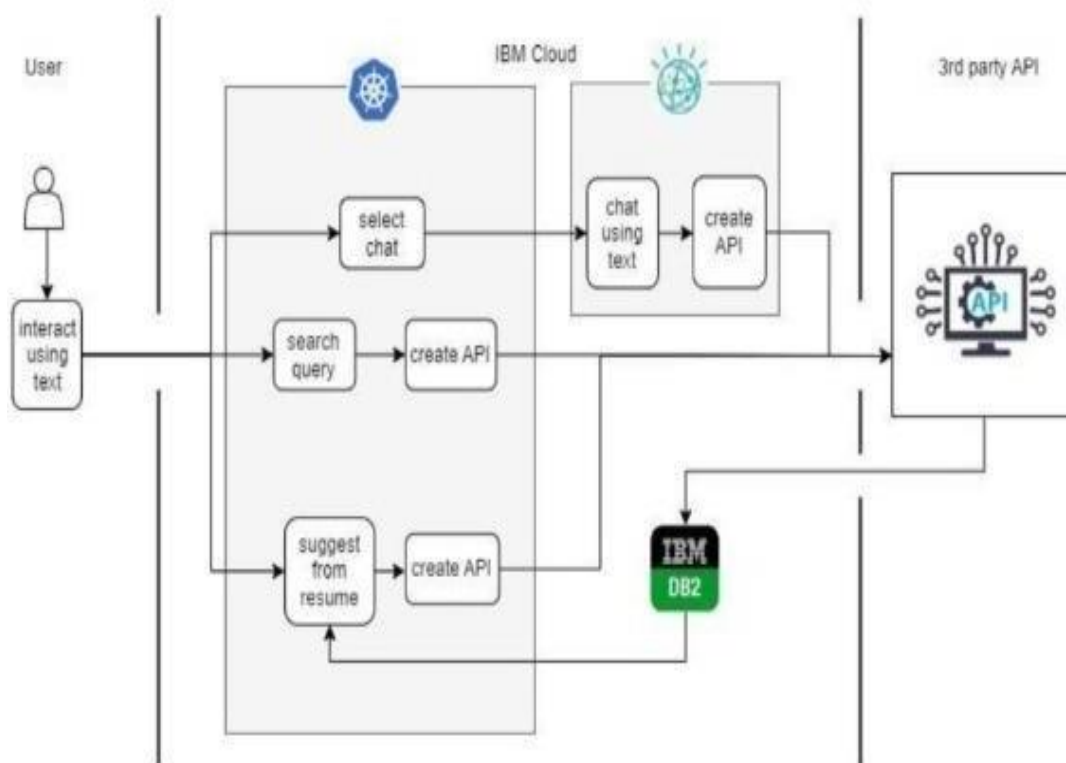
2 LITERATURE SURVEY

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 PhysicalSciences 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: ChengYang,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.

References

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[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

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[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,

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[7] Emmanuel Malherbe , Mamadou Diaby , Mario Cataldi

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Recommendation to Social Network Users". 2014

IEEE/ACM International Conference on Advances in Social

Networks Analysis and Mining (ASONAM 2014).

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 skilledperson 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 openingsbased 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 APIto get the current job openings in the market which will fetch the data directly from the webpage.

3 IDEATION & PROPOSED SOLUTION

Empathy Map Canvas
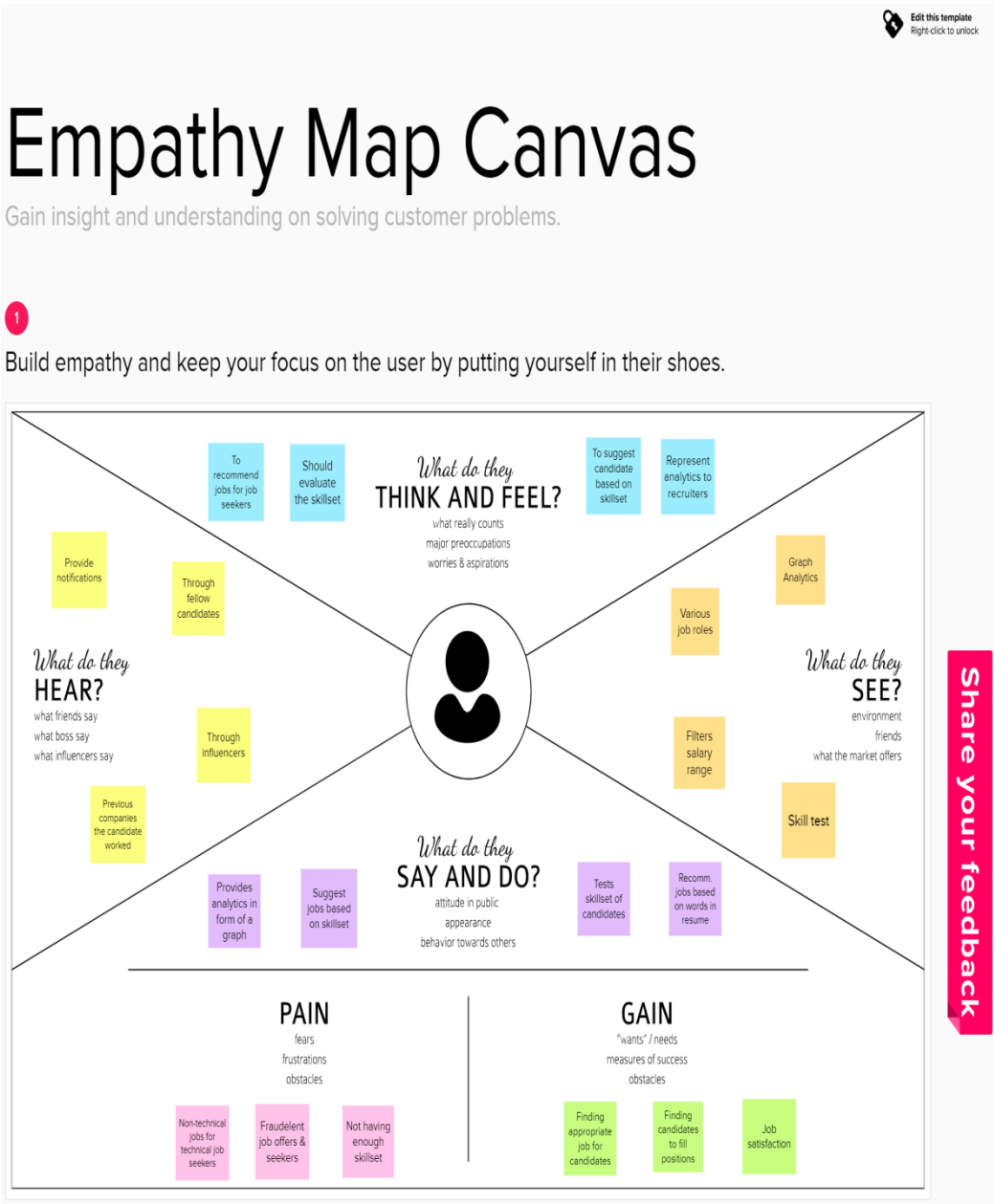
Ideation & Brainstorming
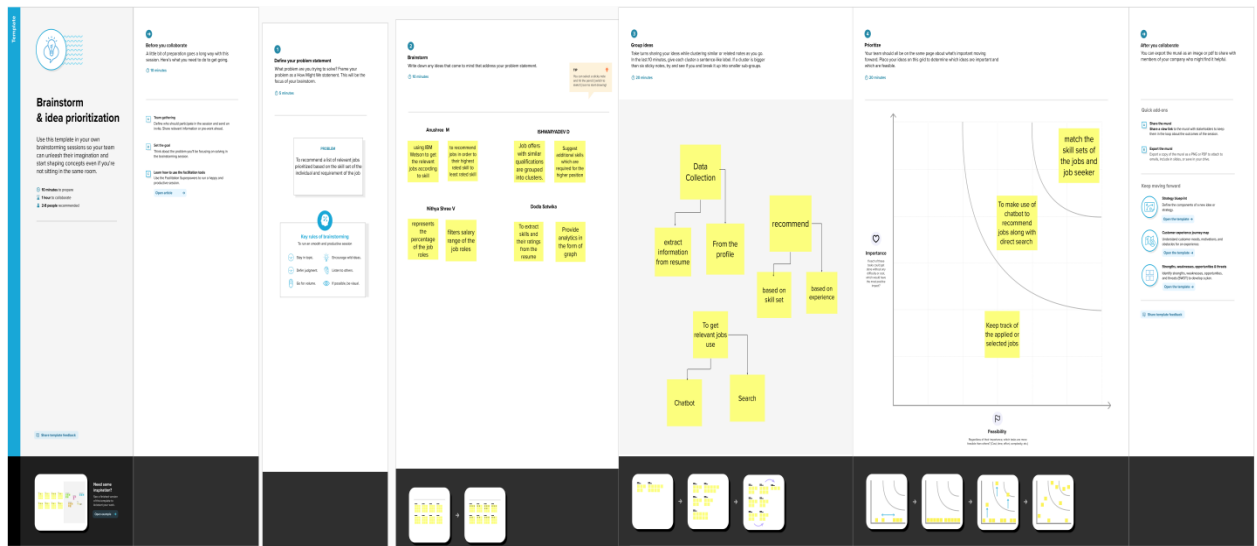
Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	These days, many students and job seekers have excellent capabilities but are unable to land the desired or suitable employment. To solve this problem, an end-to-end web application that can present current job vacancies depending on user skill sets can be developed.
2.	Idea / Solution description	To develop an web application which in default have a lot of current job openings through job search API out of which appropriate job will be recommended based on user skill set. At the same time students can develop their skills side by side with various courses and webinars offered by reputed organization. In addition to this a smart chat bot will be available for 24*7 which can help users in finding the right job
3.	Novelty / Uniqueness	A chatbot can easily save time and effort. These chatbot communicate with humans in a very natural form to resolve their queries and to assist them as required. The major challenge is no reply from industry side. In this project user get notification wheather they accept or reject the application
4.	Social Impact / Customer Satisfaction	The user allowed to choose the required job as per his/her skill level. It helps user to make right decision to choose their required field job.
5.	Business Model (Revenue Model)	We can provide the application for job seekers in a subscription based. We can share the profiles with companies and generate the revenue by providing them best profiles.
6.	Scalability of the Solution	In this system, we demonstrate a chatbot that uses Artificial Intelligence to produce dynamic responses to online client enquiries. Data can be scaled up and scaled down according to number of current job openings available.

Problem Solution fit

Problem-Solution fit canvas 2.0

Skill/Job recommender   Team ID - PNT2022TMID16271

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1. CUSTOMER SEGMENT(S) `CS`

Who is your customer?
i.e. working parents of 0-5 y.o. kids

The main customers for our project are :

- Persons who are seeking employment

- Persons that recruit job candidates

Define CS, fit into CC

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6. CUSTOMER CONSTRAINTS `CC`

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

- Concern about misuse of personal information

- Worry about unreliable connections

- Inadequate product knowledge

- Potential Scam

- Time consuming

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5. AVAILABLE SOLUTIONS `AS`

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital note taking

Pros	Cons
Promotion of people's skillset	Delivering false information
Marketing of company infrastructure	Occurrence of fraudulent activity
Cultivate commercial relationship	Intense competition

Explore AS, differentiate

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2. JOBS-TO-BE-DONE / PROBLEMS `J&P`

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

- Create a platform to facilitate job searching

- A platform to make it simpler to identify people with the necessary skills

- Make the job-filtering process simpler

- Profile with safe personal data

Focus on J&P, tap into

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9. PROBLEM ROOT CAUSE `RC`

What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations.

- Jobs that are listed on unreliable platforms maybe fraudulent

- Companies fail to disclose their true infrastructure

   Some job portals want payment in advance of the job starting.

- Users pretend to have expertise in a skillset they lack

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7. BEHAVIOUR `BE`

What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

- When Users apply for fraudulent jobs, they get unhappy due to wasted time

- Users were not satisfied when platforms allowed hirers to post jobs that were not real

- Cheating during online recruitment process

- When candidates with inadequate qualifications apply for a position, employers become irritated.

Focus on J&P, tap int C

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3. TRIGGERS `TR`

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

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4. EMOTIONS: BEFORE / AFTER `EM`

How do customers feel when they face a problem or a job and afterwards?

Emotions-Before	Emotions-After
Lack of knowledge about job vacancy.	User receive updates on job vacancies.
No proper platform to showcase skillset	Exhibit skillset in profile
More paperwork during recruitment	Easy recruitment process

Identify strong TR & EM

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10. YOUR SOLUTION `SL`

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.

To develop an web application which in default have a lot of current job openings through job search API out of which appropriate job will be recommended based on user skill set. At the same time students can develop their skills side by side with various courses and webinars offered by reputed organization. In addition to this a smart chat bot will be available for 24*7 which can help users in finding the right job

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8. CHANNELS of BEHAVIOUR `CH`

ONLINE
What kind of actions do customers take online? Extract online channels from #7

   Apply for jobs
   Review job applications Attend
   initial level assessment

OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

- Final level interview

- Checkout location and infrastructure of company

- Finalize paperwork

Extract online & offline CH of BE

4   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.

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

Data Flow Diagrams
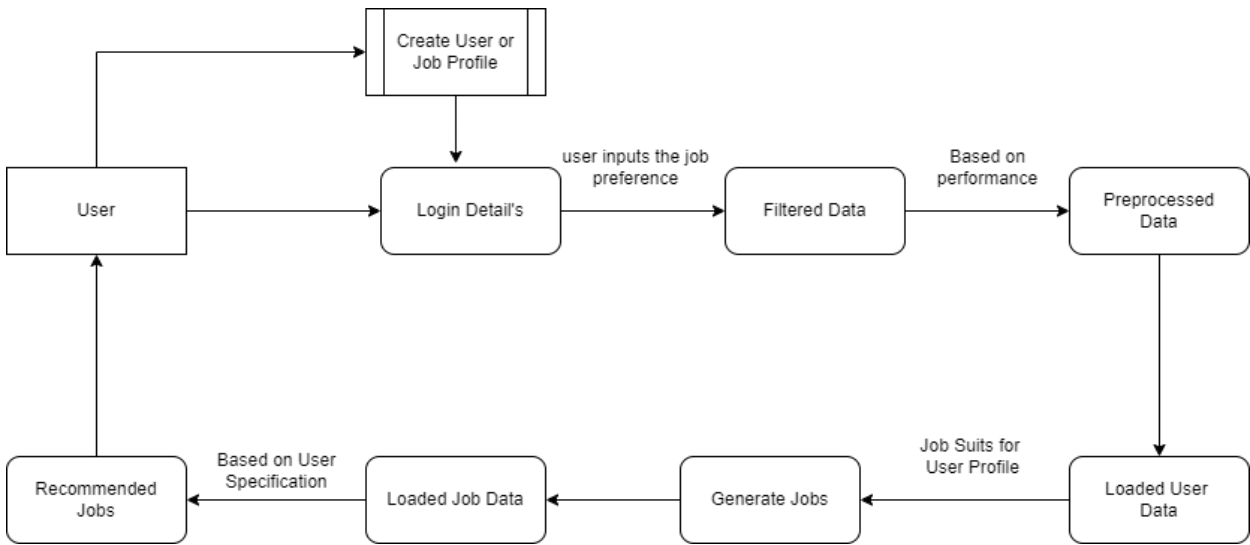
Solution & Technical Architecture
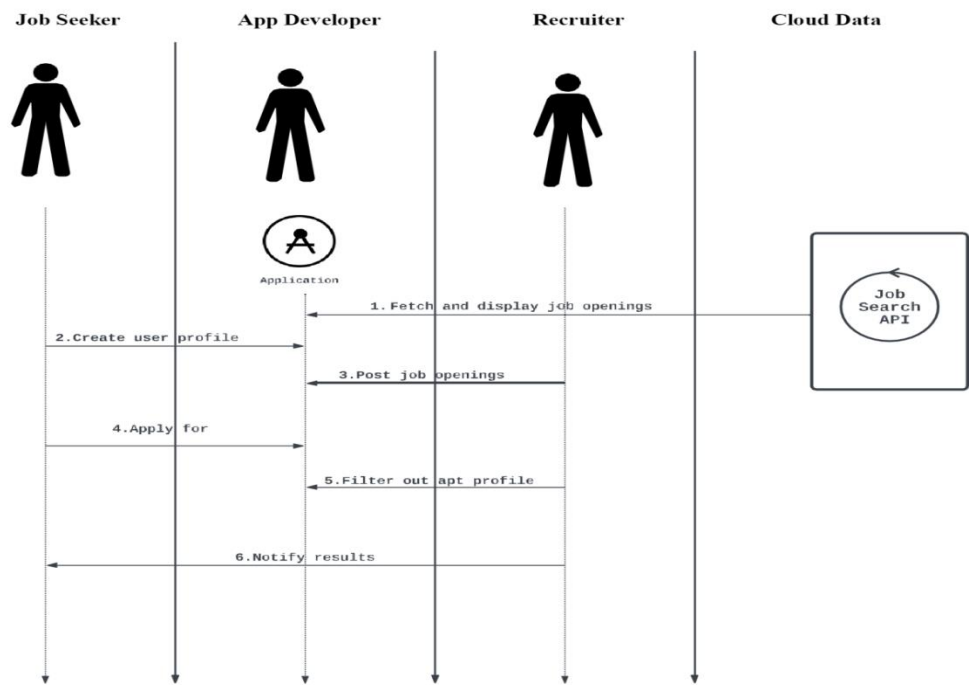
User Stories

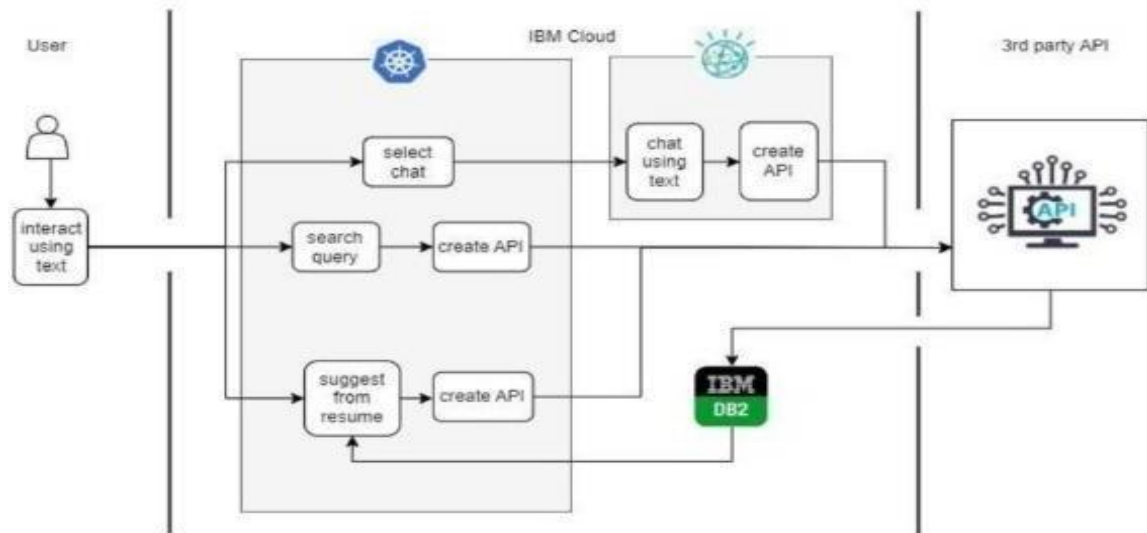| User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Registration	USN-1	As a user, I can register for an account by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		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	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail	I can register & access the dashboard with Gmail Login	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can access the dashboard	High	Sprint-1
	Search	USN-6	As a user, I can search for the desired companies	Companies related to the search terms are listed	High	Sprint-2
	Apply	USN-7	As a user, I can apply for a company	Application is submitted to the company	High	Sprint-2
	Review	USN-8	As a user, I can review the company	Review is listed on the company's profile	Medium	Sprint-2
Admin	Forward	USN-9	As an admin, I must forward the applications to the respective companies	The application is received by the company	High	Sprint-1
	Send Confirmation	USN-10	Confirmation mail is sent from the respected company	Confirmation is received by the user	High	Sprint-2
	Manage Review	USN-11	As an admin, I must make the reviews appear on the company's profile	Reviews appear on the company's page	Low	Sprint-2

6 PROJECT PLANNING & SCHEDULING

Sprint Delivery Plan

Product Backlog, Sprint Schedule, and Estimation:

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 byentering my email, password, and confirming my password.	5	High	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-1		USN-2	As a user, I will receive confirmation email onceI have registered for the application	5	High	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-2		USN-3	As a user, I can register for the application through Facebook	3	Low	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-2		USN-4	As a user, I can register for the application through Gmail	5	Medium	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	5	High	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-2	Search	USN-6	As a user, I can search for the desired companies	5	High	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-3	Apply	USN-7	As a user, I can apply for a company	4	High	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-3	Review	USN-8	As a user, I can review the company	4	Medium	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-4	Forward	USN-9	As an admin, I must forward the applications tothe respective companies	4	High	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree
Sprint-4	Send Confirmation	USN-10	Confirmation mail is sent from the respectedcompany	4	High	Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree

| Sprint-4 | Manage Review | USN-11 | As an admin, I must make the reviews appearonthe company's profile | 3 | Low | Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree |
| Sprint-4 | Chatbot | USN-12 | As a user, I can interact with Watson Assistantto resolve my queries | 5 | Low | Dodla Satwika, IshwaryaDev, Nithya Shree, AnuShree |

Project Tracker :

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	15	6 Days	26 Oct 2022	31 Oct 2022	15	31 Oct 2002
Sprint-2	15	6 Days	02 Nov 2022	07 Nov 2022	15	03 Nov 2022
Sprint-3	10	6 Days	09 Nov 2022	14 Nov 2022	15	14 Nov 2022
Sprint-4	10	6 Days	16 Nov 2022	21 Nov 2022	15	21 Nov 2022

Velocity:

Sprint-1 and Sprint-2

$$AV = \frac{\text{Sprint duration}}{\text{Velocity}} = \frac{15}{6} = 2.5$$

Sprint-3 and Sprint-4

$$AV = \frac{\text{Sprint duration}}{\text{Velocity}} = \frac{10}{6} = 1.66$$

JIRA FILES :

Road Map

Burndown Chart

11/17/22, 7:30 PM   Advanced Burndown Chart Dashboard Item for Jira
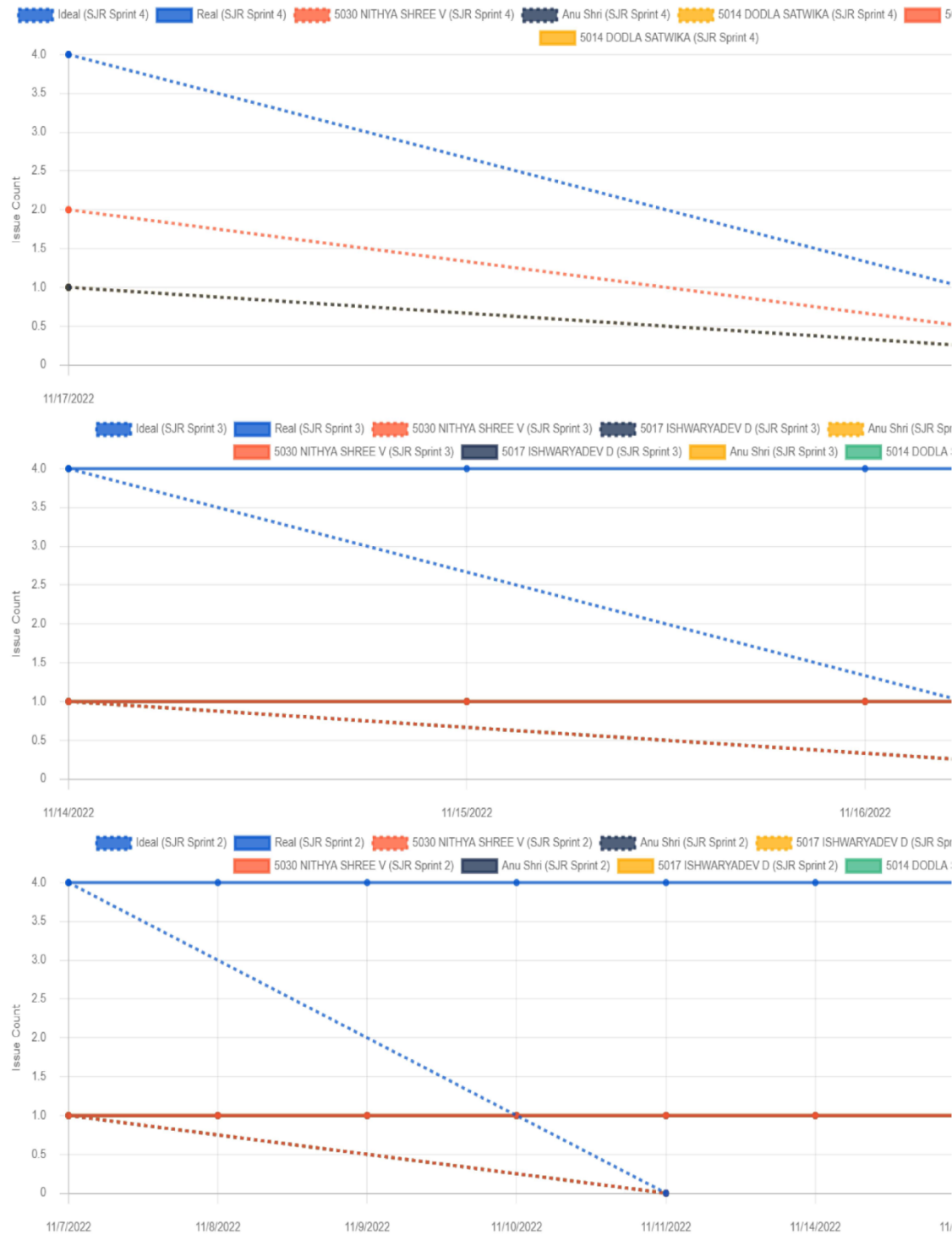
11/17/22, 7:30 PM — Advanced Burndown Chart Dashboard Item for Jira
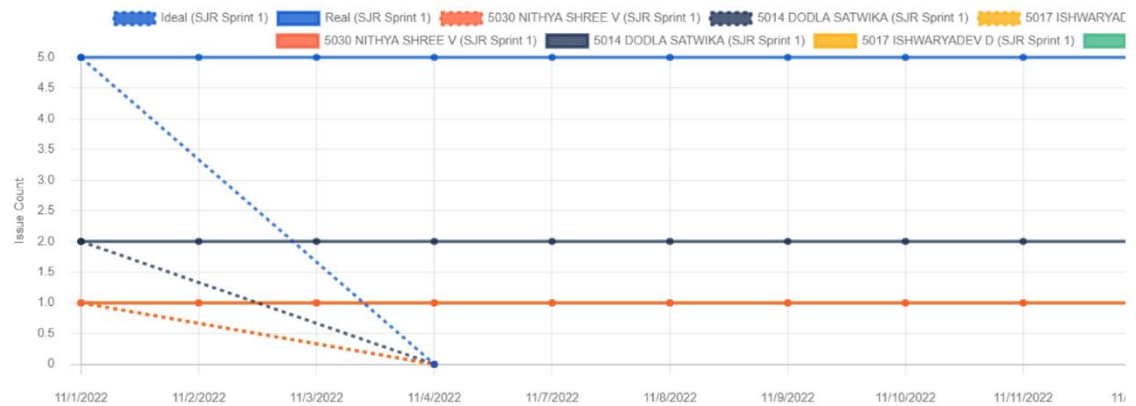
7 CODING & SOLUTIONING

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

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.
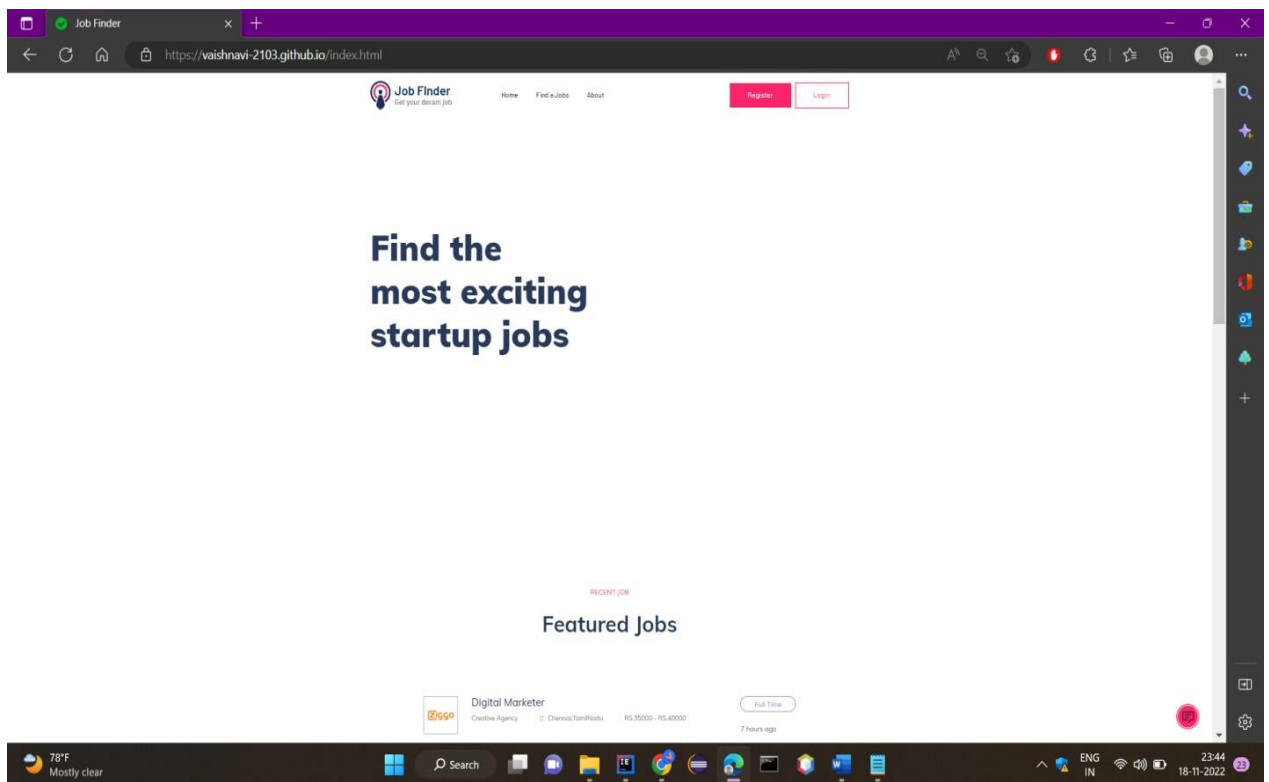
8 TESTING

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.

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.

9 RESULTS

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 eachnew 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 of1'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 computingsimilarity.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 uponachieving 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.

10 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

11 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 preferencesof the user with the given document whereas collaborative filtering recommends based on thepreferences 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 thelimitations. A fully functioning user interface was developed to combine everything togetherto give the user a seamless experience.

12 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 andlongitudes of the user-preferred location and computing the euclidean distances between the latitudes and longitudes of the organization location.

As part of the future work, we plan to use features of similar candidates and jobs in sequence information. As of now, recommendation using similar candidates an jobs forms part of non-machine learning based recommendations and the initial result seem promising.Finally, it would be interesting to extend our methodology to other recommender system.

13 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">
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storage.appdomain.cloud/jobportalwebsite/assets/css/bootstrap.min.css">
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```

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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">
```

```html
            <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>
            <!-- 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 :

github.com/IBM-EPBL/IBM-Project-25987-1659978781