

**HX8001 - PROFESSIONAL READINESS FOR INNOVATION
EMPLOYABILITY AND ENTREPRENEURSHIP**

SKILL AND JOB RECOMMENDER

PROJECT REPORT

Submitted by

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ABSTRACT

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 send when there is opening based on the user skillset .students will have the skill but they unable to get the desired job for skills they have. We are proposing an application which will help the students to give suggestions on the jobs based the skills. Students can also enquire about skills that are required to their desired job. 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. We can develop this application by using python, flask.

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1. INTRODUCTION

When the whole world is coming back on its feet, those businesses affected by this pandemic disease slowly tries to gain back the momentum it lost. Now is the time when the companies or businesses seek to invest in human resources, which would help them to gain the momentum it lost during this period. When the governments across the world ask businesses to halt the operation in the effort of controlling the pandemic, many companies asked their employees to work remotely. In contrast, many other companies started to reduce their operational cost by terminating employees who were in permanent and contract roles. Individuals who lost their job to the consequence of shutdown are awaiting for their next opportunity. Naturally, we human tries to strive through all difficulties to serve the purpose of our life. A daily job provides a sense of purpose to an individual (stillman,2019), and he tries to get better at it, which results in leaving current employment and looking for a new one; this is a constant cycle of the hiring process.

To serve the constant cycle of the hiring process in the job applicant's perspective, many job companies have come up with solutions for providing the job board. Here a seeker looks up for the job he would find relevant to him and apply for it. As there are many job boards, applicants tend to use the tool that provides better services to them, services such as writing a CV, creating a job profile, and recommending new jobs to a job seeker.

1.1 PROJECT OVERVIEW

A big part of project management is planning out our project in detail. You begin by identifying the work that must be done. To make the project easy to manage, you break the work down into bite size pieces. Once you have your list of tasks, you can start estimating who's going to do the work? How long each task will take, and how much they'll cost. Figuring out when things happen requires some special techniques. To build a schedule, you have to take into account factors like how tasks depend on one another. How much resources are available to work on tasks and when those resources are available. Planning also includes how you'll run the project. How will the team communicate? With what tools and how often? You'll also put together other plans for managing change and risk and what you'll do to ensure quality. All of this information goes into a set of documents that represent the project plan. The completed project plan doesn't get put on a shelf to gather dust. You use it over the life of the project. To direct the people working on your project. To keep track of how the project is going. To correct course and communicate with stakeholders. Are you ready to build a project plan? We'll explore each component of a project plan in detail. Because a project's schedule is a key component of your plan, an entire chapter is devoted to how you build one .There are loads of personal information that you have to display on your profile for prospective employers to see.

1.2 PURPOSE

The purpose of this study is to investigate recommendation systems within educational contexts, successful implementations of Recommendations system architecture patterns, and alternatives to previous experience when evaluating candidates

This project are gives you the ability to showcase your profile, expertise, recommendations and connections, not only is your profile the first professional impression of you when recruiters and employers use this project to search for candidates but it also demonstrates credibility in your industry and highlights your achievements. Many people still underestimate the importance of this project in their job search and are sometimes reluctant to embrace social media. This article showcases 7 reasons why using this project can add value to your job search. In this functionality, jobs will be recommended on the basis of explicit searching by the user. The user will be able to enter the keywords, their skills, interests, or job areas they are interested in.

The system will recommend jobs after matching those particular keywords with the job descriptions of companies.

The jobs are listed in the decreasing order of appropriateness to the user. It is unique for each user based on their profile.

2. LITERATURE SURVEY

Paper 1: Jorge Valverde-Rebaza, Ricardo Puma, Paul Bustios, Nathalia C. Silva, Job Recommendation based on Job Seeker Skills: An Empirical Study, March 2018.

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. Thus, the contributions of this work are threefold, we: i) made publicly available a new dataset formed by a set of job seekers profiles and a set of job vacancies collected from different job search engine sites; ii) put forward the proposal of a framework for job recommendation based on professional skills of job seekers; and iii) carried out an evaluation to quantify empirically the recommendation abilities of two state-of-the-art methods, considering different configurations, within the proposed framework In this paper, we proposed a framework for job recommendation task. This framework facilitates the understanding of job recommendation process as well as it allows the use of a variety of text processing and recommendation methods according to the preferences of the job recommender system designer. Moreover, we also contribute making publicly available a new dataset containing job seekers profiles and job vacancies. Future directions of our work will focus on performing a more exhaustive evaluation considering a greater amount of methods and data as well as a comprehensive evaluation of the impact of each professional skill of a job seeker on the received job recommendation.

Paper 2: Shaha T. Al-Otaibi^{1*} and Mourad Ykhlef², A survey of job recommender systems, 3 August, 2012.

Recommender systems are being broadly accepted in various applications to suggest products, services, and information items to latent customers. Many e-commerce applications join recommender systems in order to expand customer services, increase selling rates and decrease customers search time (Schafer et al., 1999). For example, a wide range of companies such as the online book retailer Amazon.com (Linden et al., 2003), books (Mooney and Roy, 2000), and news articles (Das et al., 2007). Additionally, Microsoft provides users many recommendations such as the free download products, bug fixes and so forth (Shani and Gunawardana, 2011). All these companies have successfully set up commercial recommender systems and have increased web sales and improved customer fidelity. we used a literature analysis of many journals and proceedings related to the recruiting process and the job recommendation researches. We have seen from our literature review and from the challenges that faced the holistic erecting, 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 survey 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 improvement

2.1 EXISTING PROBLEM

- One of the biggest downfalls and turnoff of LinkedIn is time consumption. The required amount of time you have to invest before you can learn to use it efficiently.
- Unlike other sites, for you to get the most out of LinkedIn you have to be willing to set aside some of your precious time every day.
- There are loads of personal information that you have to display on your profile for prospective employers to see.
- Hence, in a case whereby servers develop an issue, you stand a risk of losing important information to the public, resulting in identity theft.
- Risk of identity theft. There are loads of personal information that you have to display on your profile for prospective employers to see.

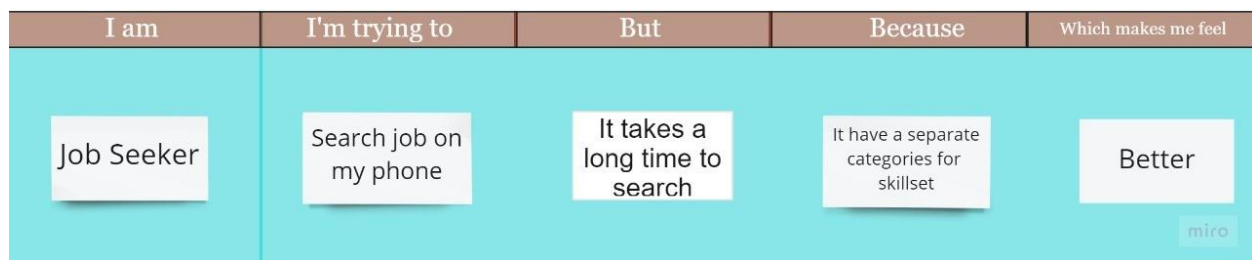
2.2 REFERENCES

- V. Gupta and G.S.Lehal, “A survey of text mining techniques and applications,” *Journal of Emerging Technologies in Web Intelligence*, vol. 1, no. 1, pp. 60–76, 2009.
- J. Fenn, “Managing citations and your bibliography with bibtex,” *e PracTEX Journal*, vol. 4, 2006.
- S.Rojas-Galeano, “GitHub repository: job-resume-lit-rev,” <https://github.com/Sargaleano/job-resume-lit-rev/>.
- N.Chaparro and S. Rojas-Galeano, “Revealing the research landscape of Master’s degrees via bibliometric analyses,” *Library Philosophy and Practice (E-journal)*, Article ID 5351, 2021.
- M. Aria and C. Cuccurullo, “bibliometrix: an R-tool for comprehensive science mapping analysis,” *Journal of Informetrics*, vol. 11, no. 4, pp. 959–975, 2017.
- G. S. Patience, C. A. Patience, B. Blais, and F. Bertrand, “Citation analysis of scientific categories,” *Heliyon*, vol. 3, Article ID e00300, 2017.
- B. Elango and P.Rajendran, “Authorship trends and collaboration pattern in the marine sciences literature: a scientometric study,” *International Journal of Information*

Dissemination and Technology, vol. 2, no. 3, pp. 166–169, 2012.

- X. Yi, J. Allan, and W. B. Croft, “Matching resumes and jobs based on relevance models,” in Proceedings of the 30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, New York, NY, USA, 2007

2.3 PROBLEM STATEMENT DEFINITION



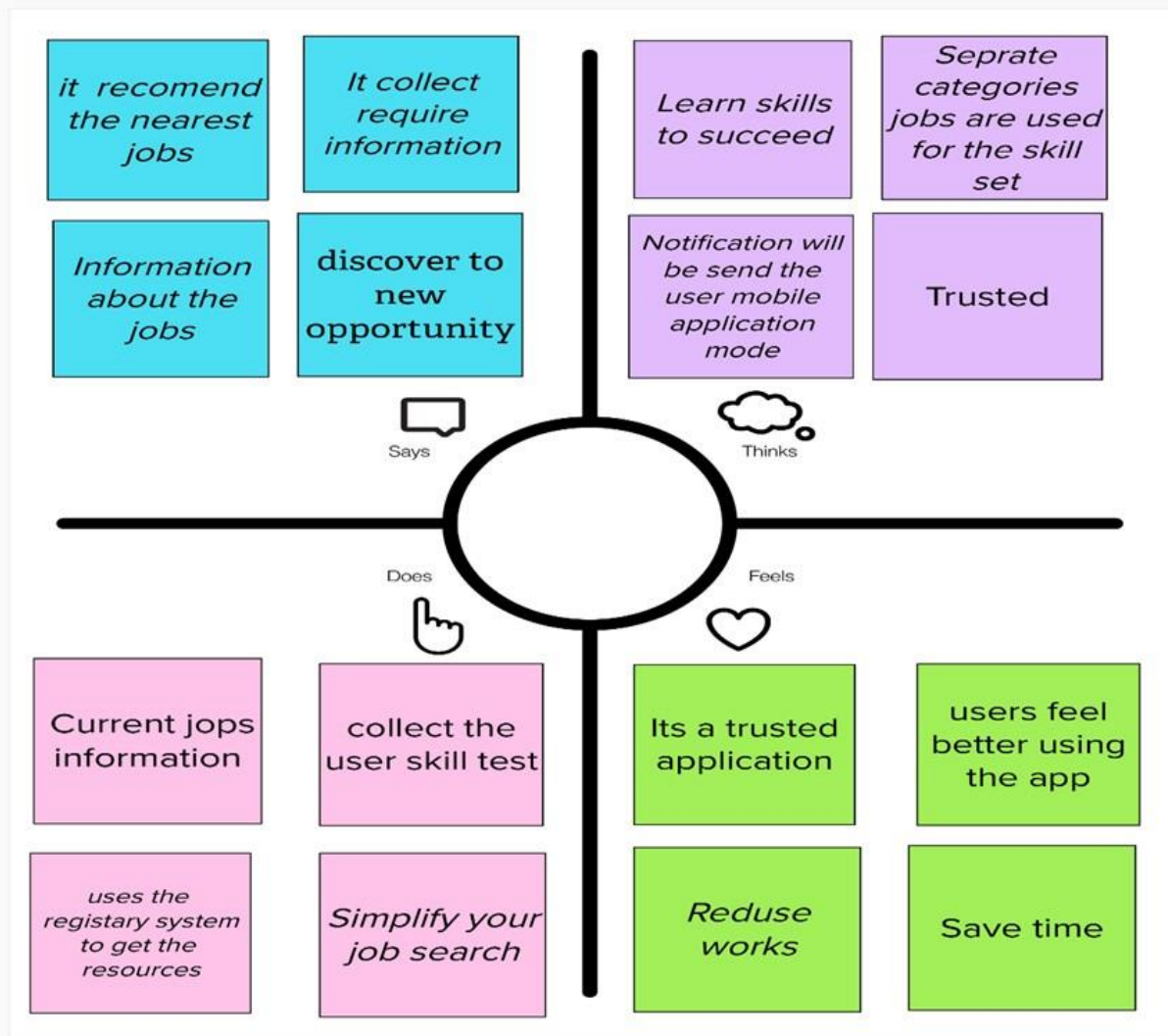
Reference:

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[ps://miro.com/welcomeonboard/QWlqT2x3OWJNZldmUWZTcDZJUElWeERIVnpWTW5KZnlhODFGM0pPSTN4cFM2Y3BQVk8yRWMyMjNOdDU5cFh0NHwzNDU4NzY0NTM0MzIxMDg1NTU4fDI=?share link_id=472411001864](https://miro.com/welcomeonboard/QWlqT2x3OWJNZldmUWZTcDZJUElWeERIVnpWTW5KZnlhODFGM0pPSTN4cFM2Y3BQVk8yRWMyMjNOdDU5cFh0NHwzNDU4NzY0NTM0MzIxMDg1NTU4fDI=?share link_id=472411001864)

3. IDEATION & PROPOSED SOLUTION

3.1 EMPHATHY MAP CANVAS





Reference:

<https://app.mural.co/invitation/mural/skillandjobrecommender3456/1662997946545?sender=u681ffd1350672586c0ce7955&key=558d7927-c3ad-41bc-be64-72c8db8e4f3b>




3.2 Ideation & Brainstorming

Template




Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.


 10 minutes to prepare
 1 hour to collaborate
 2-8 people recommended

[Share template feedback](#)



Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

 10 minutes

A Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

C Learn how to use the facilitation tools


Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) →

1


Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

 5 minutes


PROBLEM


How might we [your problem statement]?





Key rules of brainstorming


To run a smooth and productive session


 Stay in topic.


 Encourage wild ideas.

 Defer judgment.

 Listen to others.

 Go for volume.

 If possible, be visual.

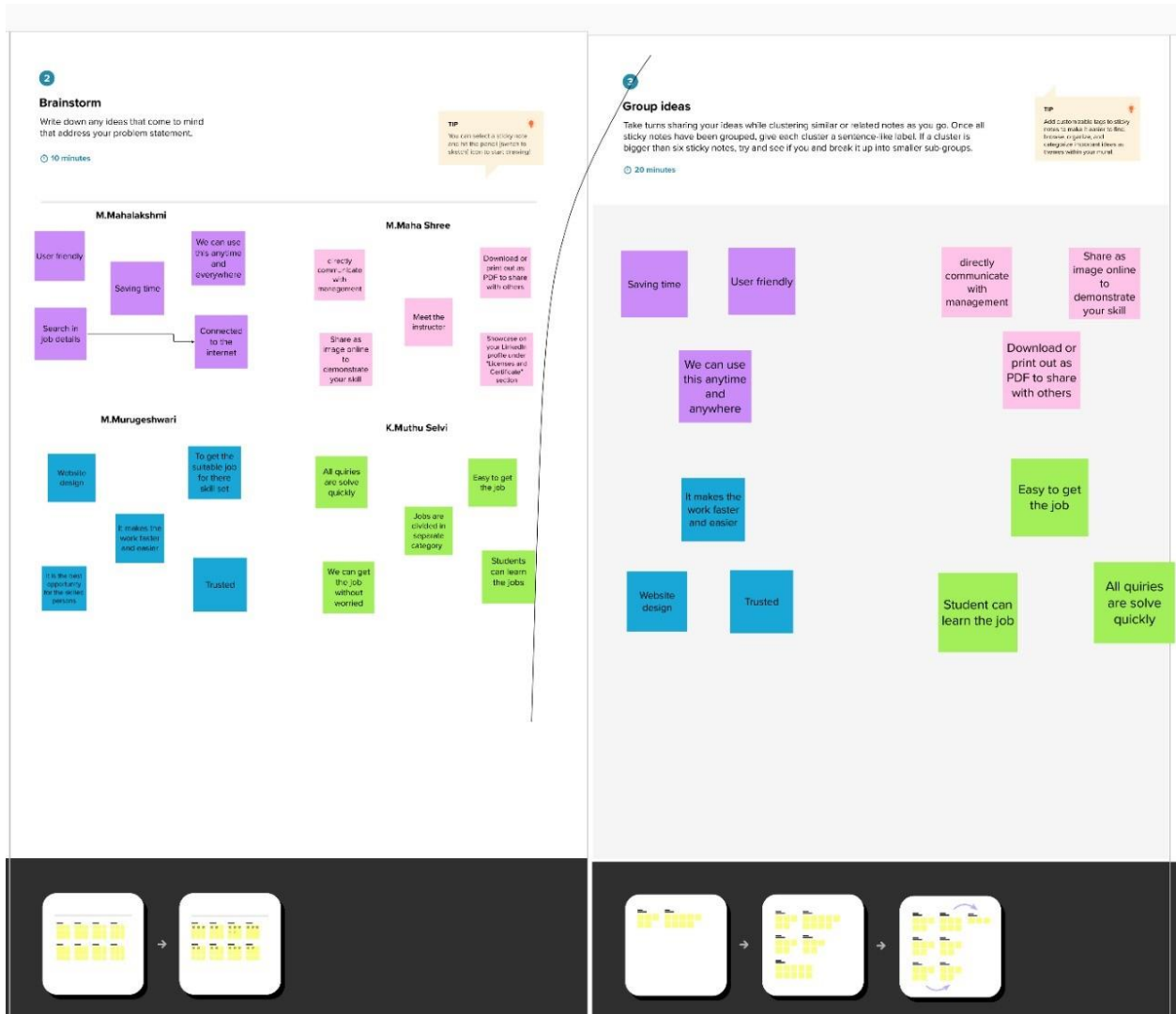


Need some inspiration?

See a finished version of this template to kickstart your work.

[Open example](#) →

14



4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the lower pointer holding the **H** key on the keyboard.



➔

After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

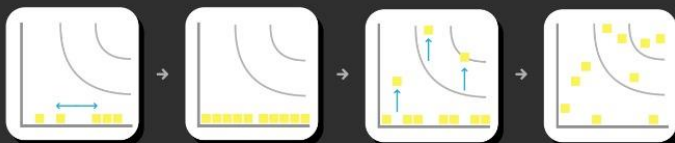
Quick add-ons

- A Share the mural**
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.
- B Export the mural**
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward

- Strategy blueprint**
Define the components of a new idea or strategy.
[Open the template →](#)
- Customer experience journey map**
Understand customer needs, motivations, and obstacles for an experience.
[Open the template →](#)
- Strengths, weaknesses, opportunities & threats**
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
[Open the template →](#)

[Share template feedback](#)



Reference: <https://app.mural.co/invitation/mural/mahalakruth0593/1665064039089?sender=ufd2b48d509010057f5385210&key=aae20b0e-1b20-488b-aec9-9909d8a22411>

3.3 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Find the suitable job is difficult.
2.	Idea / Solution description	Jobs are ordered in skill set wise.
3.	Novelty / Uniqueness	Jobs are divided in separate categories.
4.	Social Impact / Customer Satisfaction	Users feel better for finding there jobs.
5.	Business Model (Revenue Model)	LinkedIn, hirist.
6.	Scalability of the Solution	The best solution to most database scalability issues is optimizing SQL queries and implementing indexing strategies.

3.4 Problem Solution fit

Project Title: Skill and job recommender		Project Design Phase- I- Solution Fit Template		Team ID: PNT2022TMID50144	
Define CS, fit into	1. CUSTOMER SEGMENT(S) CS <ul style="list-style-type: none"> Job seeker Student Manager 	6. CUSTOMER CC <ul style="list-style-type: none"> Anxiety-customer began to get anxious when they still no idea about for their suitable job. Mysteries-they might Called it mysteries which they can't able to conclude it (founded thing) and giveup. 	5. AVAILABLE SOLUTIONS AS <ul style="list-style-type: none"> By searching jobs. By gathering the information from the peoples and come to understanding. 	Explore AS	
	2. JOBS-TO-BE-DONE / PROBLEMS J&P <ul style="list-style-type: none"> Find the suitable job is difficult. Giving the necessary information for particular thing which needs for customer 	9. PROBLEM ROOT CAUSE RC <ul style="list-style-type: none"> Unaware of the object New to environment 	7. BEHAVIOUR BE <p>When the user Don't have the knowledge about particular thing (finding job) this kind of situation occurs.</p>		Focus on J&P, map into BE, understand
Identify strong TR & EM	3. TRIGGERS TR <ul style="list-style-type: none"> To help peoples to get extra knowledge about the thing in. 	10. YOUR SOLUTION SL <p>To develop and end to end web application capable of displaying current job opening based on the user skill set. Students can also enquire about skills that are required to their desired job.</p>	8. CHANNELS of BEHAVIOUR CH <p>8.1 ONLINE</p> <ul style="list-style-type: none"> Online websites Social media platforms <p>8.2 OFFLINE</p> <ul style="list-style-type: none"> Customer throw words 	Extract online & offline CH of BE	
	4. EMOTIONS: BEFORE / AFTER EM <ul style="list-style-type: none"> Before: unease about something with an uncertain outcome (showing worry) After: pleasure of blessedness and brightness in face. 				

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Focus	Focus on user requirements
FR-4	Objectives	Describe what the product does
FR-5	Documentation	Captured in use case
FR-6	Origin type	Usually defined by user

4.2 Non-Functional requirements

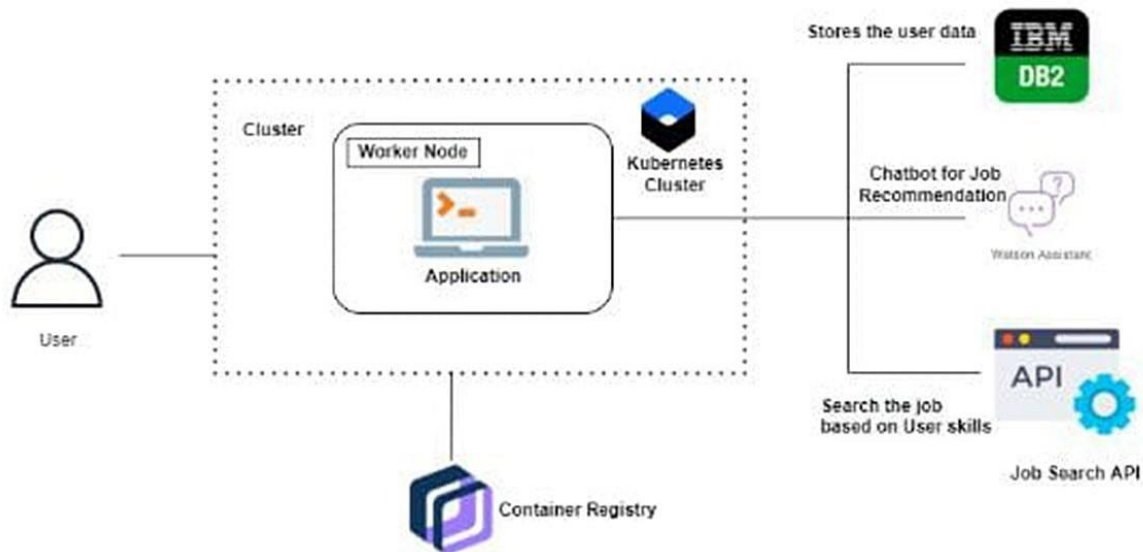
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Attempt to improve its functionality
NFR-2	Security	Assuring all data inside the system
NFR-3	Reliability	Typically part of a technical specifications document
NFR-4	Performance	The performance attribute of a software system
NFR-5	Availability	How likely the system is accessible to a user at a given point in time
NFR-6	Scalability	The ability to appropriately handle increasing workloads

5. PROJECT DESIGN

5.1 Data Flow 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.

5.2 Solution & Technical Architecture



5.3 User Stories

User journey

How to design your user journey map

People 2-8

Time 30min

Difficulty Beginner

Creating a user journey is a quick way to help yourself and your team gain a deeper understanding of who you're designing for, and the stakeholders in your project. The information you add here should be representative of the observations and research you've done about your users.

Phases <small>High-level phases that describe the journey from start to finish</small>	Upload a professional photograph	Add your location and industry	Add five skills or more	Fill out Education
Steps <small>Intermediate steps that describe the journey from start to finish</small>	Application.	In-person interviewing.	Assessment test.	Resume screening.
Feelings <small>Emotions you might be feeling at each step of the journey</small>	<div>Strategy</div> <div>Some times hang</div>	<div>Scope</div> <div>Insecurity</div>	<div>better</div> <div>Surface</div>	<div>Structure</div> <div></div>
Pain points <small>Problems your user faces (Pain)</small>	<div>Technical issues</div> <div>Multiple interruptions</div>	<div>Poor communication from management</div> <div>Lack of flexible options</div>	<div>Office politics</div> <div>Lack of recognition</div>	<div>Senior management roles are hard to fill</div> <div>Insufficient communication</div>
Opportunities <small>Things that could improve or add value to the experience</small>	<div>Design thinking</div> <div>Recommended job</div>	<div>Good placement</div> <div>Improve knowledge</div>	<div>New information</div> <div>Purchasing agent</div>	<div>Structure thinking</div> <div>Concerned</div>

Storyboard your user journey

Storyboard your user journey

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	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	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 & application Through Gmail	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can access my account	High	Sprint-1
	Dashboard	USN-6	As a user, I can log into my account for the mobile	I can access my account /Dashboard	High	Sprint-1
Customer (Web user)	Registration	USN-7	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	Sprint-1
		USN-8	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-9	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-10	As a user ,I can upload a Profile photo and add my name to my account	I can upload my Profile photo/Name in my account	Medium	Sprint-1
Customer Care Executive	Customer Support	USN-11	As a user, I can support for customers to handle queries and complaints from their customers	I can support for customers to clear complaints	High	Sprint-1
Administrator	Responsibility	USN-12	As a system administrator I want to be able to add new users when required so that	I Can add new users	High	Sprint -1

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

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	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

6.2 Sprint Delivery Schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Acceptance criteria	Team Members
Sprint-1	UI Design	USN-1	As a user, I can see and experience an awesome user interface in the website	Medium	Better Impression about a website	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-1	Registration	USN-2	As a user, I can register for the application by entering my email, password, and confirming my password.	High	I can access my account / dashboard	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-1		USN-3	As a user, I will receive confirmation email once I have registered for the application	High	I can receive confirmation email & click confirm	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-1		USN-4	As a user, I can register for the application through Facebook	Low	I can register & access the dashboard with Facebook Login	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-1		USN-5	As a user, I can register for the application through Gmail	Medium	I can receive confirmation email & click confirm	M.Mahalakshmi, M.Maha shree, M.Murugeshwari,

						K.Muthu selvi
Sprint-1	Login	USN-6	As a user, I can log into the application by entering email & password	High	I can access my account / dashboard	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-1	Flask	USN-7	As a user, I can access the website in a second	High	I can access my account / dashboard	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Acceptance criteria	Team Members
Sprint-1	Dashboard	USN-8	As a user, If I Logged in correctly, I can view my dashboard and I can navigate to any pages which are already listed there.	High	I can access all the pages/ dashboard	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
			Submission Of Sprint-1			
Sprint-2	User Profile	USN-9	As a user, I can view and update my details	Medium	I can modify my details/data	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-2	Database	USN-10	As a user, I can store my details and data in the website w	Medium	I can store my data	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-2	Cloud Storage	USN-11	As a user, I can upload my photo, resume and much more in the website.	Medium	I can Upload my documents and details	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-2	Chatbot	USN-12	As a user, I can ask the Chatbot about latest job openings, which will help me and show the recent job openings based on my profile	High	I can know the recent job openings	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi

Sprint-2	Identity-Aware	USN-13	As a User, I can access my account by entering by correct login credentials. My user credentials is only displayed to me.	High	I can have my account safely	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
			Submission of Sprint-2			

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Acceptance criteria	Team Members
Sprint-3	Sendgrid service	USN-14	As a user, I can get a notification or mail about a job opening with the help of sendgrid service.	Medium	I can get a notification in a second.	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi
Sprint-3	Learning Resource	USN-15	As a user, I can learn the course and I will attain the skills which will be useful for developing my technical skills.	High	I can gain the knowledge and skills	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi
Sprint-3	Docker	USN-16	As a user, I can access the website in any device	High	I can access my account in any device	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi
Sprint-3	Kubermates	USN-17	As a user, I can access the website in any device	High	I can access my account in any device	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi
Sprint-3	Deployment in cloud	USN-18	As a user, I can access the website in any device	High	I can access my account in any device	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi
Sprint-3	Technical support	USN-19	As a user, I can get a customer care support from the website which will solve my queries.	Medium	I can tackle my problem & queries.	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi

			Submission of Sprint-3			
Sprint-4	Unit Testing	USN-15	As a user, I can access the website without any interruption	High	I can access the website without any interruption	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi
Sprint-4	Integration testing	USN-16	As a user, I can access the website without any interruption	High	I can access the website without any interruption	M.Mahalakshmi, M.Maha shree, M.Murugeswari, K.Muthu selvi

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Acceptance criteria	Team Members
Sprint-4	System testing	USN-17	As a user, I can access the website without any interruption	High	I can access the website without any interruption	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-4	Correction	USN-18	As a user, I can access the website without any interruption	High	I can access the website without any interruption	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
Sprint-4	Acceptance testing	USN-19	As a user, I can access the website without any interruption	High	I can access the website without any interruption	M.Mahalakshmi, M.Maha shree, M.Murugeshwari, K.Muthu selvi
			Submission of Sprint-4			

6.3 Reports from JIRA

[Instructor] Let's navigate another aspect of our JIRA project, that is Reports. Once you navigate to this page, you will see that JIRA provides a bunch of reports. Let's take a look at the Velocity Report here. And as you can see, our sprint closed with one story not in a status of done, so this is showing Commitment and Completed. And at the bottom, you can see that the team had committed to completing work with 36 story points, and out of that 28 were completed. Now since we have just completed one sprint, we don't have a lot of data so we cannot completely rely on this team velocity of about 28 story points per sprint. We are going to let this tool capture story points completed per sprint for next several sprints, at the minimum about three, before we can conclude anything about team velocity. Team velocity is a critical metric that is captured for agile teams. Now the team velocity may vary because of so many reasons. They could be reasons such as vacation, people getting. Research shows that competitive perks can be enough to sway applicants away from higher paying jobs

7. CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 Features 1

Feature (i): quick and easily registration.

Feature (ii): Advanced filters

Feature (iii): job save

Feature (iv): Career advancement

Feature (v): work balance

7.2 features 2

- Activity Dashboard.
- Activity Tracking.
- Alerts/Notifications.
- Applicant Tracking.
- Candidate Management.
- Interview Management.
- Job Posting

8. TESTING

8.1 Test cases

- * Login Page (Functional)
- * Login Page (UI)

8.2 User Acceptance Testing

1. Purpose of Document

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

2. Defect Analysis

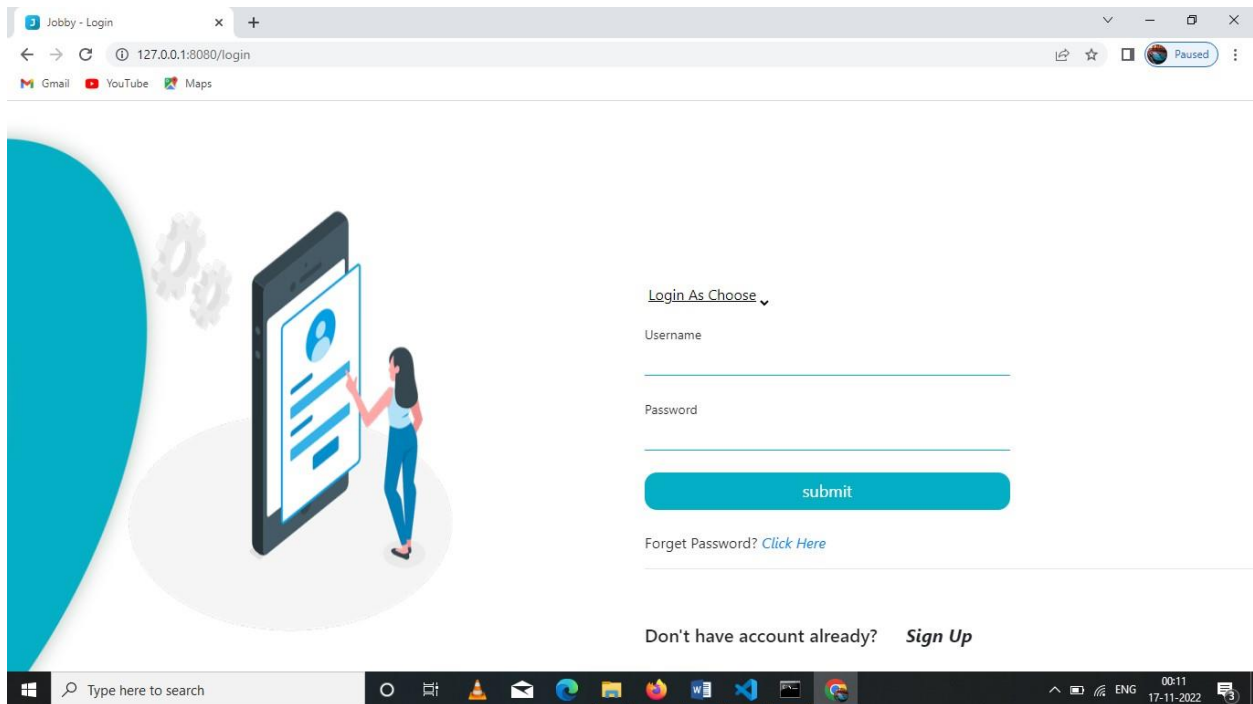
This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

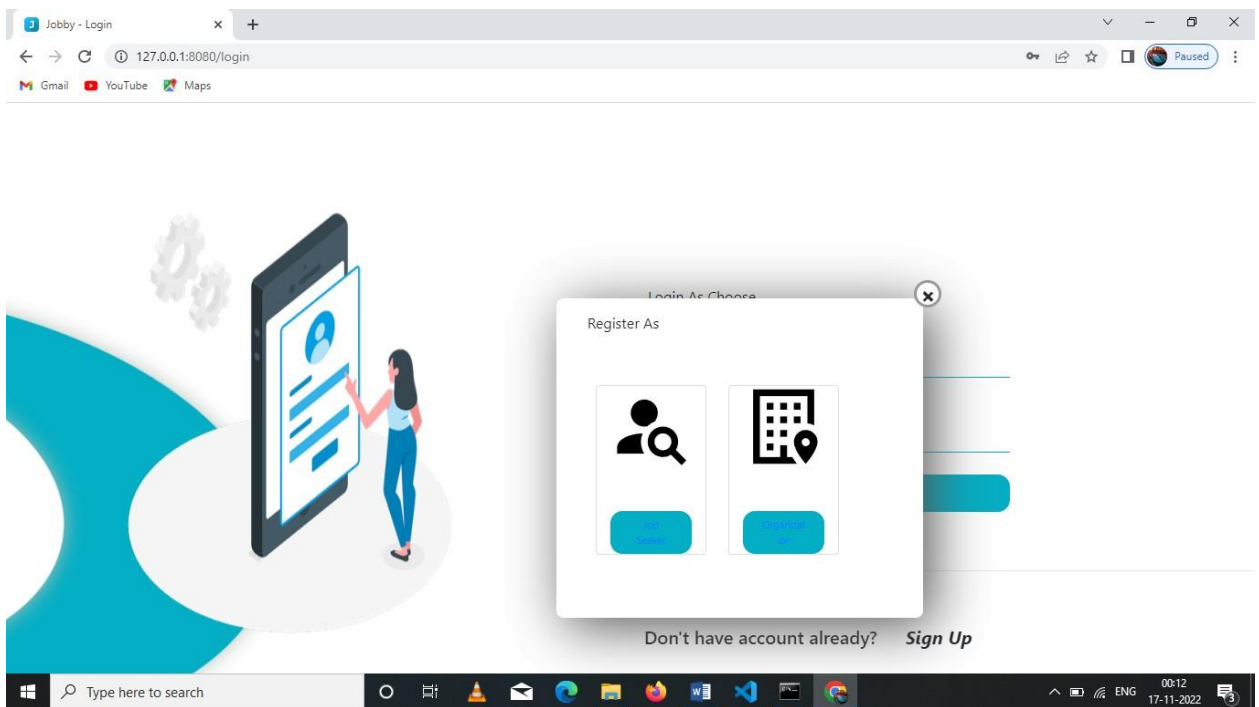
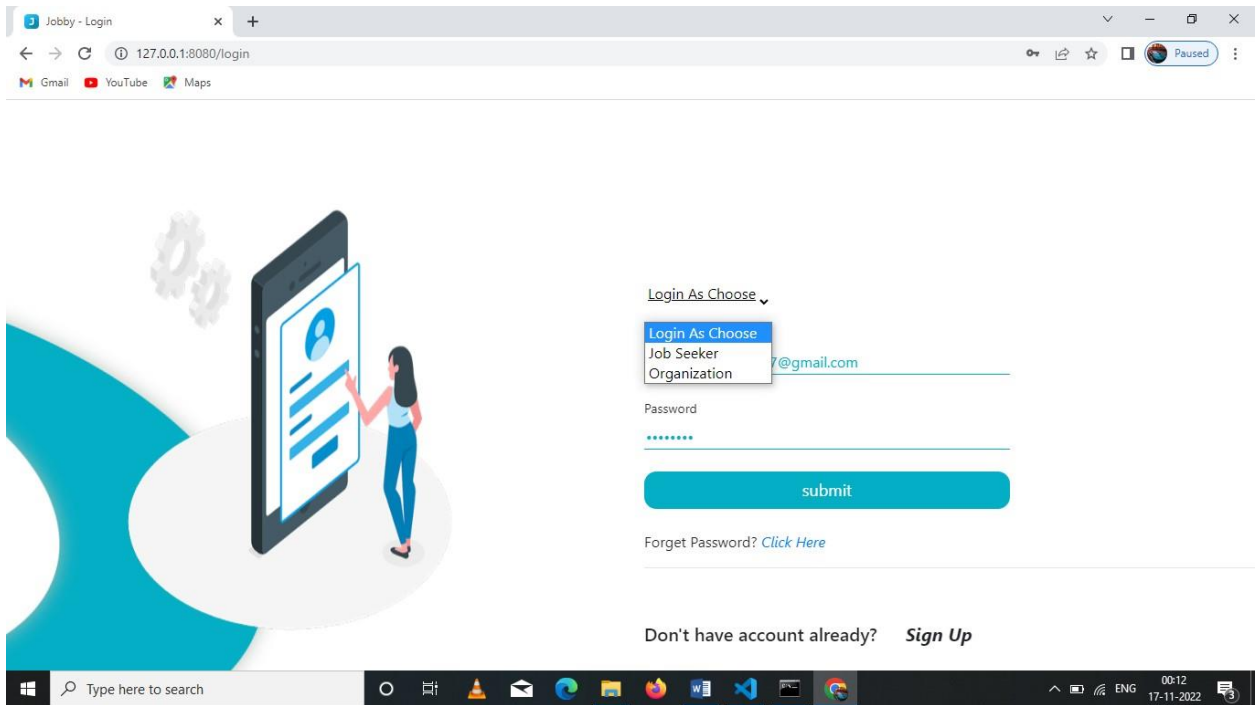
Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	4	2	8	15
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	9	2	4	11	20
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	5	0	1	8
Totals	22	14	11	22	51

9. RESULTS

In this section, we present the results of the biblio metric-guided literature review on job-resume matching research. We organise these results in the facets of research production (performance indicators and research trends) and structures of knowledge (conceptual, social, and intellectual merging structures). After discussing our main finding, we carried out a narrative review of selected relevant works focusing on the application of NLP approaches to the job-resume matching problem.

9.1 PERFORMANCE METRICS





10. ADVANTAGES & DISADVANTAGES

Advantages:

- The first and foremost advantage is the fact that a particular project is handled by separate project manager as he or she will concentrate only on that particular project that makes it more likely to achieve success.
- Another proof project management is that it helps the company in achieving efficiency when it comes to capital, labour, and other operational related expenses as it keeps a close watch on all the activities of the project which in turn helps the management in identifying the areas which are revenue leaking and helps the company in saving lot of capital
- It helps the company in developing managerial qualities in talented people by assigning them first small projects and then big projects which in turn create a favourable atmosphere in the company where people know that there is ample scope for growth.
- Project management creates a system whereby workflow is measured and accounted for, ensuring that resources are used judiciously in fulfilling the goals of the project.
- This type of planning establishes expectations for staffers, provides clear directives and builds in procedures for quickly addressing unexpected outcomes

DISADVANTAGES

- The biggest disadvantage of project management is that sometimes it leads to overlapping of authority and responsibility between the top management and project management where they have different plans in mind which leads to confusion among the team members of project and further project suffering.
- Another con of project management is that it may be possible that there is no competent staff to carry the responsibility of project manager and if management selects incompetent staff then project will be a failure leading to losses for the company.
- Another limitation of project management is that suppose the company is working on 10 projects simultaneously then it will require 10 project managers to handle those projects which is not possible if the company is small and ultimately all projects are handled by either single project manager or top management itself and thus limiting the use of project management.
- Lack cluster Creativity. Strict project management can discourage outside the box thinking and hamper creative efforts. Project teams that experience collective creative block can slow progress, employ cost overages and generally take a project off-track. Intervention and creativity-generating approaches, like brainstorming sessions, may be necessary to refocus the group.

11. CONCLUSION

Our project is focused on content and conversation. The company wants to give its members an opportunity to share what they want and need, help others and take help. What makes our project is Live different from other platforms is the professional context. This project was able to cultivate a very trustworthy environment on their platform, which is something the organization is very proud of. It caters to the professional audience, which implies a very different mindset compared to other social media platforms. Since all posted content is linked back to the professional ID, people are very cognizant of what they put out and how they present themselves. This has a potential of making the content presented on this project Live more credible and more valuable to the audience. This also affects the quality of the conversation.

12. FUTURE SCOPE

When it comes to searching for jobs, LinkedIn can be a powerful resource. It allows employers to post job openings to the site (like any online job board), and you can search for these openings using the job search tool. LinkedIn also allows you to use your connections to find new positions and ask for recommendations. Their interfaces and mechanisms are much easier to use. LinkedIn is however good for getting your profile in front of recruiters, who will then contact you. Online learning will see continued massive growth (and learning will be part of everyone's job). Research shows that competitive perks can be enough to sway applicants away from higher paying jobs.**it can provide goals to work toward each day and an income to support you financially.** It can help you build skills and experience that will last throughout your career, even if you change careers later in life.

13. APPENDIX

Source code:

app.py:

```
from flask import * import os import ibm_db import bcrypt
from functools import partial, wraps from flask_mail import Mail, Message conn =
ibm_db.connect("DATABASE=;HOSTNAME=;PORT=;SECURITY=;SSLServerCertificate=;PROTOCO
L=;UID=;PWD=",",",")

#-----FLASK MAIL IS USED IN login() Function----- app = Flask(__name__)
app.secret_key = "
PEOPLE_FOLDER = os.path.join('static', 'people_photo')

mail=Mail(app)

app.config['MAIL_SERVER']='smtp.gmail.com' app.config['MAIL_PORT'] = 465
app.config['MAIL_USERNAME'] = 'spdineshwaran4@gmail.com' app.config['MAIL_PASSWORD'] =
'wowcfyoaajduxvha' app.config['MAIL_USE_TLS'] = False app.config['MAIL_USE_SSL'] = True mail =
Mail(app)

@app.route("/")
@app.route("/home")

def home():
    return render_template("home.html")
```

```
@app.route('/logout') def logout():
    session.pop('loggedin', None)
    session.pop('id', None)
    return redirect(url_for('home'))
```

```
@app.route("/register",methods=['GET','POST'])
#-----SPRINT-1-----
```

```
@app.route("/orgregister",methods=['GET','POST'])
#-----SPRINT-1-----
```

```
@app.route("/login",methods=['GET','POST'])
def login():
    if request.method == 'POST':
        if(request.form['logval']=="recruiter"):
            email = request.form['email']
            password = request.form['password']
            if not email or not password:
                return render_template('login.html',error='Please fill all fields')
            query = "SELECT * FROM RECRUITER WHERE email=?"
            stmt = ibm_db.prepare(conn, query)
            ibm_db.bind_param(stmt,1,email)
            ibm_db.execute(stmt)
            dictionary = ibm_db.fetch_assoc(stmt)
            if not dictionary:
                return render_template('login.html',error='Invalid Credentials')

            isPasswordMatch = bcrypt.checkpw(password.encode('utf-
```

```
8'),dictionary['PASSWORD'].encode('utf-8'))
```

```
if not isPasswordMatch:
    return render_template('login.html',error='Invalid Credentials')
session['loggedin'] = True
session['id'] = dictionary['EMAIL']
f=session['id']
# Redirect to home page
session['active']="jobseeker"
msg = Message('New Login Found Just Now!!!', sender = 'spdineshwaran4@gmail.com', recipients =
[session['id']])
msg.body = "Hello User\nWe had came to know that you have logged in our jobby portal just now."
mail.send(msg)
return org_det(f)
```

```
elif(request.form['logval']=="jobseeker"):
    email = request.form['email']
    password = request.form['password']
    if not email or not password:
        return render_template('login.html',error='Please fill all fields')
    query = "SELECT * FROM JOBSEEKER3 WHERE email=?"
    stmt = ibm_db.prepare(conn, query)
    ibm_db.bind_param(stmt,1,email)
    ibm_db.execute(stmt)
    dictionary = ibm_db.fetch_assoc(stmt)
    if not dictionary:
        return render_template('login.html',error='Invalid Credentials')
```

```
isPasswordMatch = bcrypt.checkpw(password.encode('utf-
8'),dictionary['PASSWORD'].encode('utf-8'))
```

```
if not isPasswordMatch:
    return render_template('login.html',error='Invalid Credentials')
```

```

    session['loggedin'] = True
    session['id'] = dictionary['EMAIL']
    f=session['id']
    session['active']="recruiter"
    msg = Message('New Login Found Just Now!!!', sender = 'spdineshwaran4@gmail.com', recipients =
[session['id']])
    msg.body = "Hello User\nWe had came to know that you have logged in our jobby portal just now."
    mail.send(msg)
    # Redirect to home page
    return user_det(f)

return render_template('login.html',name='Home')

@app.route('/browse')
def addMarker():
    if 'loggedin' in session:
        #-----SPRINT-2-----
        return render_template("browse.html",result=a)
@app.route('/companies') def companies():
    #-----SPRINT-2-----
    return render_template("companies.html",result=a) @app.route("/jobdiscription",methods=['GET','POST'])
def jobdiscription():
    #-----SPRINT-3-----
    if request.method=='POST':
        jobid=request.form['jobid']
        print(jobid)
        return jd(jobid)
    return render_template('jobdiscription.html')

def jd(id1):
    query="SELECT * FROM JOBPOST WHERE JOB_ID = " + id1
    print(query)
    stmt = ibm_db.prepare(conn, query)

```

```

ibm_db.execute(stmt)
dictionary = ibm_db.fetch_assoc(stmt)
jobtitle=dictionary["JOBTITLE"]
jobtype=dictionary["JOBTYPE"]
exp=dictionary["EXPERIENCE"]
keyskills=dictionary["KEYSKILL"]
location=dictionary["LOCATION"]
salary=dictionary["SALARY"]
discription=dictionary["DISCRIPTION"]
return render_template('jobdiscription.html', jobid=id1, jobtitle=jobtitle, jobtype=jobtype, exp=exp,
keyskills=keyskills, location=location, salary=salary, discription=discription)

```

```

@app.route("/applyjob",methods=['GET','POST']) def applyjob():
#-----SPRINT-3-----
if request.method=='POST':
    cand_id=request.form['cand_id']
    jobid=request.form['jobid']
    query="INSERT INTO APPLYJOB (CANDIDATE_ID, JOB_ID) VALUES(?,?)"
    prep_stmt=ibm_db.prepare(conn, query)
    ibm_db.bind_param(prepare_stmt, 1, cand_id)
    ibm_db.bind_param(prepare_stmt, 2, jobid)
    ibm_db.execute(prepare_stmt)
    msg = Message('Application Submitted', sender = 'spdineshwaran4@gmail.com', recipients = [session['id']])
    msg.body = "Hello User,\nCongratulations!!!,You have successfully applied for the job.If you are
shortlisted the recruiter will communicate with you\n\n\nWith regards,\nJobby."
    mail.send(msg)
    return render_template('browse.html')
@app.route("/browse/searchjob",methods=['GET','POST']) def searchjob():
    if request.method=='POST':
        searchopt=request.form['searchopt']
        srctitle=request.form['srctitle']
        query = "SELECT * FROM JOBPOST WHERE "+searchopt+"="+chr(39)+srctitle+chr(39)

```



```

stmt = ibm_db.prepare(conn, query)
ibm_db.execute(stmt)
a=[]
isUser = ibm_db.fetch_assoc(stmt)

while(isUser!=False):
    a.append(isUser)
    isUser = ibm_db.fetch_assoc(stmt)
return render_template('browse.html',result=a)

if __name__ == "__main__": #checking if __name__'s value is '__main__'. __name__ is an python
environment variable who's value will always be '__main__' till this is the first instatnce of app.py running
app.run(debug=True,port=8080,host= '192.168.43.233') #running flask (Initalised on line 4)

```

GITHUB LINK & PROJECT DEMO LINK

Github link:

<https://github.com/IBM-EPBL/IBM-Project-21990-1659800682> https://youtu.be/BLxHZq_clwI

DEMO LINK:

https://youtu.be/BLxHZq_clwI