LITERATURE SURVEY

CLOUD APPLICATION DEVELOPMENT

SKILL AND JOB RECOMMENDER APPLICATION

1.1 SUMMARY

In this activity we have gathered and collected the relevant information on the project use cases. We have referred the existing solutions and technical papers as well as the research publications etc., regarding the project use case. The various methodologies that are all used for this use case has been studied. The methodologies involved in each article are discussed briefly. Finally, we have summarized it with the survey.

1.2 PROJECT USECASE

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

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

1.3 RESEARCH PAPERS

1.3.1 AN ANALYSIS FRAMEWORK FOR CONTENT-BASED JOB RECOMMENDATION

AUTHORS: **Xingsheng Guo, University College Dublin**

Houssem Jerbi, University College Dublin

Michael P.O'Mahony, University College Dublin

CONFERENCE: September 2014

Synergies between CBR and Data Mining in Proceedings of International Conference on Case-based Reasoning.
At: Cork, Ireland

OBJECTIVE: In this article, they addressed the problem of job recommendation based on user job application history. They proposed different personalised content-based and case-based approaches that use features ranging from extracted features to mined features and explicit features. They also proposed a hybrid approach by combining content features with well-structured features, along with various feature-weighing schemes for the case-based approaches. The experiments that they conducted using a real-world dataset from CareerBuilder showed that their hybrid approach outperforms the other approaches, especially using the DF weighing scheme.

1.3.2 JOB RECOMMENDATION BASED ON JOB SEEKER SKILLS: AN EMPIRICAL STUDY

AUTHORS: **Jorge Volverde-Rebaza**
Ricardo Puma
Paul Bustios
Nathalia C Silva

CONFERENCE: March 2018
First Workshop on Narrative Extraction from Text co-located with 40th European Conference on Information Retrieval
At: Grenoble, France

OBJECTIVE: In this paper, they 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, they also contribute making publicly available a new dataset containing job seekers profiles and job vacancies.

1.3.3 JOB RECOMMENDATION SYSTEM BASED ON MACHINE LEARNING AND DATA MINING TECHNIQUES USING RESTFUL API AND ANDROID IDE

AUTHORS: **Harsh Jain**
Misha Kakkar

CONFERENCE: January 2019
9th International Conference on Cloud Computing, Data Science & Engineering (Confluence)

OBJECTIVE: This paper is based on hiring process, where a job seeker applies to a job by creating a profile on a job portal by providing all his/her work preferences. Theses work preferences of each user can be collected from each user and provide job recommendations based on their preference. Data acquired for our study has no previous interaction between the user data and Job listing data.

1.3.4 JOB RECOMMENDATION SYSTEM USING CONTENT AND COLLABORATIVE FILTERING BASED TECHNIQUES

AUTHORS: **Juhi Dhameliya**
Nikita Desai

CONFERENCE: September 2019
International Journal on Soft Computing & Engineering

OBJECTIVE: In this paper, they concluded that by combining two or more approaches we can get more reliable and accurate recommendations of job. Further, it was found that no benchmark dataset is available on which implementation and testing can be done. CBF needs lots of pre-processing on data as it is very difficult to identify matching skills as recruiters write job description mentioning "expected skill set", in highly diversified formats.

1.3.5 A RESEARCH OF JOB RECOMMENDATION SYSTEM BASED ON COLLABORATIVE FILTERING TECHNIQUES

AUTHORS: **Yingya Zhang**
Cheng Yang
Zhixiang Niu

CONFERENCE: December 2014
7th International Symposium on Computational Intelligence and Design

OBJECTIVE: In this paper, to reduce the laborious work, they designed and implemented a recommendation system for online job-hunting. They contrast user-based and item-based collaborative filtering algorithm to choose a better performance. They also take background information including student's resumes and details of recruiting information into consideration, bring weights of co-apply users and weights of student used-liked jobs into the recommendation algorithm. At last, the model they proposed is verified through experiments study which is using actual data.

1.4 EXISTING SOLUTIONS

1.4.1 LINKEDIN.COM

It is the world's largest professional network with more than 850 million members in more than 200 countries and territories worldwide.

VISION: Create economic opportunity for every member of the global workforce.

MISSION: Connect the world's professionals to make them more productive and successful.

1.4.2 HIRIST.COM

"So many of our dreams at first seem impossible, then they seem improbable, and then, when we summon the will, they soon become inevitable."

It starts with a seed of an idea. Then that seed germinates into a thought. And finally, that thought begins to grow in your mind like a tree seeking sunshine!

It was with a similar idea that hirist was born and now that idea has grown into a platform that helps jobseekers connect with their dream job. They've connected with over 13,00,000 jobseekers already and this is just the beginning...

They feature ~~some of~~ the best jobs in Banking & Finance, Consulting, Research & Analytics, Sales & Marketing, HR, IT and Operations.

They're a team of thinkers, creators, technologists and mavericks but most importantly, They're a team of doers!

They are young, They're passionate and They're shaking up the recruitment space in India.