Ideation Phase
Literature Survey

Date	12 October 2022
Team Id	PNT2022TMID16536
Project Name	Skill and Job Recommender Application
Maximum Marks	

1.**Technical Job Recommendation System Using APIs and Web Crawling:**

With an increasing number of cash-rich, stable, and promising technical companies/startups on the web which are in much demand right now, many candidates want to apply and work for these companies. They tend to miss out on these postings because there is an ocean of existing systems that list millions of jobs which are generally not relevant at all to the users. There is an abundance of choices and not much streamlining. On the basis of the actual skills or interests of an individual, job seekers often find themselves unable to find the appropriate employment for themselves. This system, therefore, approaches the idea from a data point of view, emphasizing more on the quality of the data than the quantity.

2. Job Recommendation through Progression of Job Selection by Aakash Roy, Amber Nigam Harsimran Walia and Hartaran Singh:

This paper introduces a novel machine learning model that incorporates the dynamics of a highly volatile job market by using candidates' job preferences over time. Additionally, this strategy includes a variety of smaller recommendations that worsen the issues with

a) producing serendipitous recommendations.

b) addressing the cold-start issue for new jobs and candidates.

Skills are used as embedded features to derive latent competencies from them, thereby expanding job and candidate skills to achieve higher coverage in the skill domain. This model was created and tested in a proper job recommender system, and the best possible performance of the click-through rate metric was accomplished by combining machine learning and non-machine learning recommendations. The best results were obtained using Bidirectional Long Short-Term Memory Networks (Bi-LSTM) with Attention for recommending jobs via machine learning, which forms a significant portion of our recommendation.

3. A content based approach for recommending personnel for job positions by Nikolaos D. Almalis; George A. Tsihrintzis and Nikolaos Karagiannis:

This paper proposes a content based approach that takes into consideration an organisation's needs and the skills of candidate employees in order to quantify the suitability of a candidate employee for a specific job position. The proposed algorithm utilises Minkowski distance to perform a primary study in order to investigate how the personnel seeking and recruiting field could benefit further. Also, the paper conducts a three step experimental evaluation, namely, content analysis, refinement of the algorithm, and execution. The results of this experiment show that recommender systems can play an important role in the area of job seeking and recruiting.

4. Skill Scanner: Connecting and Supporting Employers, Job Seekers and Educational Institutions with an AI-based Recommendation System by Koen Bothmer and Tim Schlippe :

Access to education is one of people's most important assets and ensuring inclusive and equitable quality education is goal 4 of United Nations' Sustainable Development Goals. This goal should not

only refer to general education, but also to specific education in the professional environment. If people have the right education for the professional environment, they have a better chance to get jobs that allow them to have a good life. Unfortunately, there are often still gaps between the skills that are needed in the job market, the skills that job seekers have and the skills that are taught in educational institutions like schools, universities, online platforms, massive open online courses (MOOCs), etc.