

## LITERATURE SURVEY ON THE SELECTED PROJECT & INFORMATION GATHERING

- AN **END-TO-END** WEB APPLICATION CAPABLE OF DISPLAYING THE CURRENT **JOB OPENINGS** BASED ON THE **SKILLSET** OF THE USERS.
- IT USES A **JOB SEARCH API** TO GET THE **CURRENT JOB OPENINGS** IN THE MARKET WHICH WILL FETCH THE DATA DIRECTLY FROM THE WEBPAGE.
- IT ALSO CONTAINS **CHATBOT** THAT RECOMMENDS JOB FOR THE RELEVANT SKILL SET AND EXPERIENCE.

### PAPER 1

“A Review Paper on Machine Learning Based Recommendation System “

– Bhumika Bhatt

- ❖ **Recommendation system** plays important role in Internet world and used in many applications.
- ❖ It has created the collection of many application, created **global village** and growth for numerous information.
- ❖ This paper represents the overview of **Approaches and techniques** generated in recommendation system.
- ❖ Recommendation system is categorized in three classes: **Collaborative Filtering, Content based and hybrid-based Approach.**
- ❖ This paper classifies collaborative filtering in two types: **Memory based and Model based Recommendation.**

## PAPER 2

“Combining content-based and collaborative filtering for job recommendation System : A cost-sensitive Statistical Relational Learning approach “

– ShuoYang

- ❖ Recommendation systems usually involve exploiting the relations among known features and content that describe items (**content-based filtering**) or the overlap of similar users who interacted with or rated the target item (**collaborative filtering**).
- ❖ To combine these two filtering approaches, current model-based **hybrid recommendation** systems typically require **extensive feature engineering** to construct a user profile.
- ❖ **Statistical Relational Learning** (SRL) provides a straightforward way to combine the two approaches through its ability to directly represent the probabilistic dependencies among the attributes of related objects.
- ❖ Due to the large scale of the data used in real world recommendation systems, little research exists on applying SRL models to hybrid recommendation systems, and essentially **none of that research has been applied to real big-data-scale systems.**

## PAPER 3

“A bottom-up approach to job recommendation system“

– Sonu K Mishra

- ❖ In this paper, they present approaches to design a job recommendation system for a career based social networking website - XING.

- ❖ They take a **bottom up approach**: start with deeply understanding and exploring the data and **gradually build the smaller bits of the system**.
- ❖ They also consider traditional approaches of recommendation systems like **collaborative filtering** and discuss its performance.
- ❖ The best model that they produced is based on **Gradient Boosting algorithm**.

## PAPER 4

### “Technical Job Recommendation System Using APIs and Web Crawling“

– Naresh Kumar

- ❖ Through this research paper, the aim is to **automate the process to eliminate the problem of job listing**.
- ❖ To achieve this, **Puppeteer** and Representational State Transfer (**REST**) **APIs** for web crawling have been used. A **hybrid system of Content-Based Filtering and Collaborative Filtering** is implemented to recommend these jobs.
- ❖ This paper represents the overview of **Approaches and techniques** generated in recommendation system.
- ❖ This paper eliminates the problem of job listing through using various technical strategies.
- ❖ The intention is to **aggregate and recommend appropriate jobs** to job seekers, especially in the engineering domain.
- ❖ The **entire process** of accessing numerous company websites hoping to find a relevant job opening listed on their career portals is **simplified**.

## PAPER 5

### “Implementation of an Automated Job Recommendation System Based on Candidate Profiles“

–Vinay Desai

- ❖ In this paper, contrast for user-based and item-based collaborative filtering algorithm to choose a better performed one.
- ❖ We also take background information including students’ resumes and details of recruiting information into consideration,
- ❖ Content based filtering performs badly in field of multimedia and music recommendation,
- ❖ Whereas collaborative filtering bases its predictions and recommendations on the ratings or behavior of other users in the system.
- ❖ The advantages of CB and CF methods has been known.

## STUDIES

### STUDY WITH LINKEDIN

- ❖ Though LinkedIn is job search portal, it also contains a **large community app** where job search is just a **subset** of the system.
- ❖ The drawback of the system is the **user may get intimidated by the first time experience** of LinkedIn since it contains large listing of **jobs mixed with normal media posts**.
- ❖ The LinkedIn system of recommendation is **biased with premium features** where full fledged functionalities can be achieved only via **subscription**.

- ❖ The above system can be changed with a **designated job search application** where user can have information about **only jobs** and not community.
- ❖ The **premium system can be removed** so everyone gets all jobs available to their skillset.

## STUDY WITH NAUKURI

- ❖ Naukuri is another top platform for job search where the user will get large number of jobs for them.
- ❖ The naukuri's job **relevance gets distorted** with large number of results where user gets irrelevant jobs for them.
- ❖ The **large list leads to confusion** for the users. This can be solved by **creating two systems** where user can get both list of jobs and personalized recommendations
- ❖ The personalized recommendation will be the **job list is filtered out** to few jobs and that will be shown in **chatbot**.

## OUTCOMES

- ❖ The app should be minimal and intuitive interface.
- ❖ The job list should not be overwhelming.
- ❖ The filtered content for recommendation should be as relevant as possible.
- ❖ User should not be confused with using the application.
- ❖ User should get two list where the second is a personalized list with few jobs from first.