PROJECT REPORT

1.Introduction:

1.1 Project Overview

The overview of an idea is to built a job recommender systems have become popular since they successfully reduce information overload by generating

personal-ized job suggestions.Therefore,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.

iii) carried out an evaluation to quantify empirically the recommendation abilities of two state-of-the-art methods.

1.2 Purpose

The purpose of job recommenders is to summarize that help the users to the find relevant items and the predominant operationalization of this goal has been to focus on the ability to numerically estimate the users preferences for unseen items or to provide users with item lists ranked in accordance to the estimated preferences.Its a framework of recommendation goals and purposes and highlight possible future directions and challenges related to the operationalization of such alternative problem formulations.

2. Literature Survey:

2.1 Existing Problem

The recommender systems face a problem in recommending items to users in case there is very little data available related to the user or item. This is called the cold-start problem.

Reasons for Cold-Start Problem:

- Systematic Bootstrap
- Low Interaction
- New User

2.2 Refrences

The articles overcome by our teams:

- Job Recommendation Based On Job Seekers Skills: An Empirical Study.
- Job Recommendation Based on Job Profile Clustering And Job Seeking Behaviour.
- An Intelligent Knowlegde-Based Chatbot for Customer Service.
- Personalized Job Recommendation System At LinkedIn:Practical Challenges and Lessons Learned.

2.3 Problem Statement Definition

In the recommendation system, the problem is trying to forecast the opion the users will have on the dissimilar substance and be able to recommends the finest items to each user.

Another some problems in recommendation system are data sparsity, scalability and gray sheep. Data sparsity means the data is widely spread; it has null values and missing values. Scalability means the prediction is difficult in huge amount of ratings items.

3. Ideation

3.1 Empathy Map Canvas

- Define scope of the model and goals.
- Gather materials. Your purpose should dictate the medium you use to create an empathy map.
- Collect research of the required skill based recommender.
- Individually generate sticky notes for each quadrant.
- Converge to cluster and synthesize.
- Polish and plan.

3.2 Ideation And Brainstorming

- Focus on Quality - focus on generating large number of ideas.
- Without Criticism - Not hesitating the ideas faced in brainstorming.
- Building on Ideas - Transform ideas into the required solutions.

3.3 Proposed Solution

- Descripting the conventient problem statement to propose the solutions.
- Developing the specific idea presentation in according with respect to required criteria.
- The quality of begining the ideas in terms of prefered occasion.
- Developing the Revenue model dictates how our website will charge customers for a product or service to generate revenue.

3.4 Problem Solution Fit

- Developing the user profile.
- Conduct User problem Interviews.
- Developing the appropriate session profile.
- Conduct confirmation interviews.

4 Requirement Analysis:

4.1 Functional Requirement

Functional requirements are product features or functions that developers must implement to enable users to accomplish the specific tasks. In this format by implementing the registration and confirmation mail and brief descrpition of specific tasks.

4.2 Non Functional Requirement

Non Functional requirement is a set of specifications that describe the system's operation capabilities and constraints and attempt to improve its functionality. Here in this venue we discuss about the usability of the product, secured protection of the website, Relaiability of the software and the website performance of the specific software.

5 Project Design:

5.1 Data Flow Diagram

In a data flow diagram we develop the way information flows through a process or system. It includes data inputs and outputs, data stores, and the various subprocesses the data moves through. we built the data flow diagram using standardized symbols and notation to describe various entities and their relationships.

5.2 Solution & Technical Architecture

In this scenario, we devide the progress into three types as Components,Descrpition and Technology.

User interface is to identify the users interaction, and job recommended skills being implemented using python and the database is to store the default data in a specific stack.

As in terms of application, open source network agiles the open network technology and security implementation is to encrypt the secured data.

5.3 User Stories

In the user stories, we split the characteristics into five types

- Outline acceptance criteria
- Decide on User Perspective
- Creating Task on a specific notation
- Story Mapping
- Requesting the feedback of the customer

6 Project Planning and Scheduling

6.1 Sprint Planning & Estimation

We consider the User Stories for the Sprint by Priority and by the Ability of the team to deliver during the Time Box of the Sprint and the size of the Product Increment is estimated in terms of User Story Points. And we use the data and experience to supercharge the meet plan.

we break the content down into tasks, estimate those tasks, and compare the task estimates against our capacity.

6.2 Sprint Delivery Schedule

We schedule a timetable that shows the start and end date of all project tasks, and relate the task with each other. Identification of key stackholders and outline deliverables to develope our specified task.

To interface the difficulties, chat bot is implemented to troubleshoot and the planned resources is assigned to each activity.

6.3 Reports From JIRA

In this progress, helps to analyze the Progress, Issues, Showstoppers and Timeliness of our project.It helps us to track our content issues over a certain time period. And we catogorize our reports as:

- Acrobatic
- Issue Analysis
- Forecast Management

In addition to this, we have also created a pie chart in terms of subsequent contents.

7 Coding And Solutioning

7.1 Feature 1

A website is developed using HTML, CSS and JavaScript. For the backend Flask framework of Python is used. The main feature is the job search feature and user-friendly interface.

7.2 Feature 2

A chatbot is designed to interact with the users to give guidance and support whenever needed. The chatbot is used to recommend relevant jobs for users using the responses.

7.3 Database Schema

A schema is a collection of named objects. The IBM - DB2 contains tables, views, triggeres, functions, packages and other objects.

8 Testing

8.1 User acceptance & Testing

- We have tested with some users and we have taken up suggestions from them and improves our application.
- Many bugs were fixed and the website is ready for production.

9 Results

9.1 Performance Metrics

- User friendly interface
- Security of data
- Reliable to use

10 Advantages and Disadvantages

Advantages:

- One of The Most Cost-Effective and Affordable Solutions.
- Importance of an Online Job Portal For an Unemployed Person.
- Easy Job Seeking and Browsing Process.
- It's Resourceful.

Disadvantages:

- Significant investments required.
- The complex onboarding process.
- Lack of data analytics capability.
- The cold-start problem.

11 Conclusion

Finally,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 recommendationmethods according to the preferences of the job recommender system designer.

Moreover, we also contribute in making publicly available a new dataset containing job seekers profiles and job vacancies.

12 Future Scope

The objective of our project is to provide recommendations based on recorded information on the users' preferences. These systems use information filtering techniques to process information and provide the user with potentially more relevant items.

There is also the possibility of changing the suggested proposition so that the distribution of processing in several computers can be done, even if they are in a cloud computing environment.