GE19612 - PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

JOB RECOMMENDATION SYSTEM CAREER GUIDANCE – AI ASSISTED

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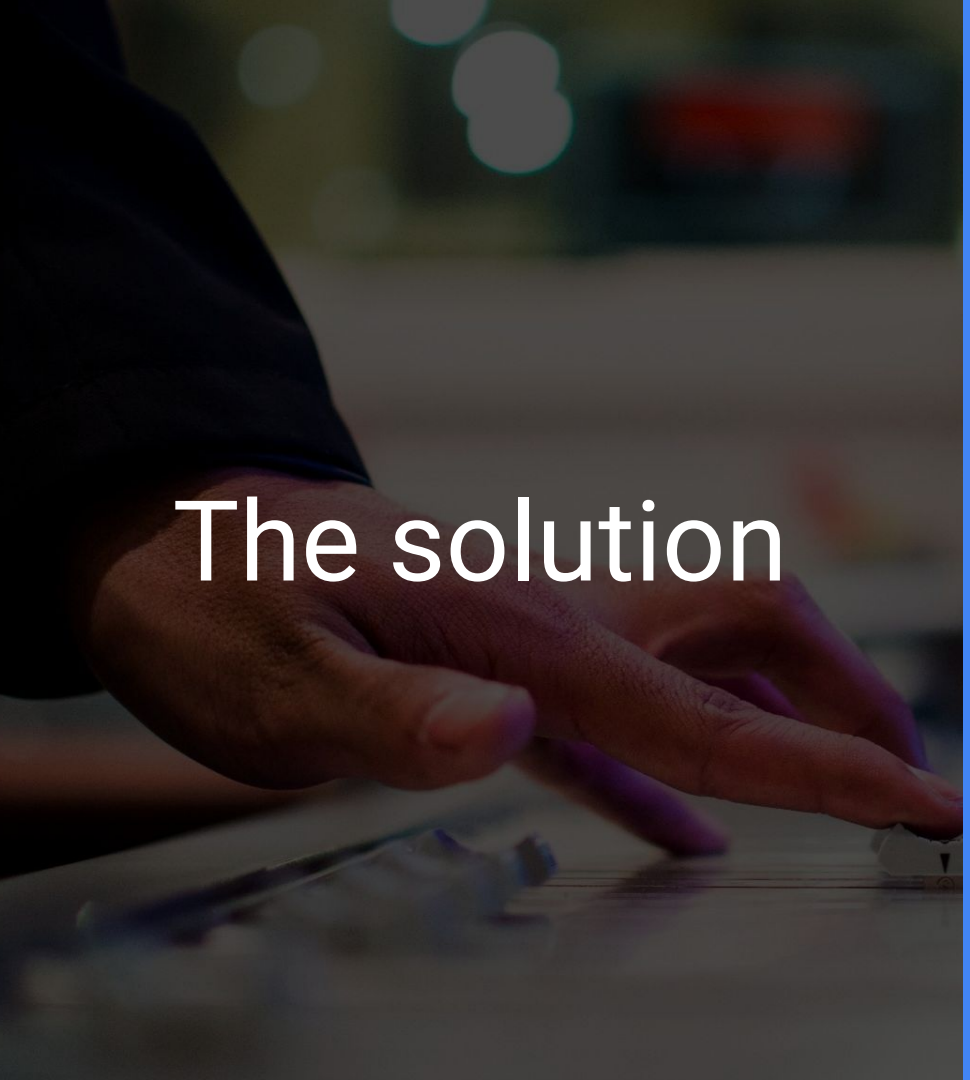
The problem

- How might we create a skill/job recommender application using suitable technology,transforming career guidance by leveraging technology to match individuals with suitable jobs, fostering efficient employment and career development?

Abstract:

In the dynamic realm of corporate world, characterized by both competition and collaboration, the process of hiring has perpetually been discerning, presenting formidable obstacles for novices or recent graduates endeavoring to penetrate the professional arena. A newbie finds it so difficult to step in which is why we have a job recommender system which will find them find and pave their path into their desired job role using collaborative filtering and content filtering integrated with machine learning NLP concepts.



The solution

- User Profile Creation
- Skill Scraping and Analysis
- Job Matching Algorithm
- Integration with External Databases and provide user jobs he is eligible for or needs to develop using ML methods.

Methodology Used:

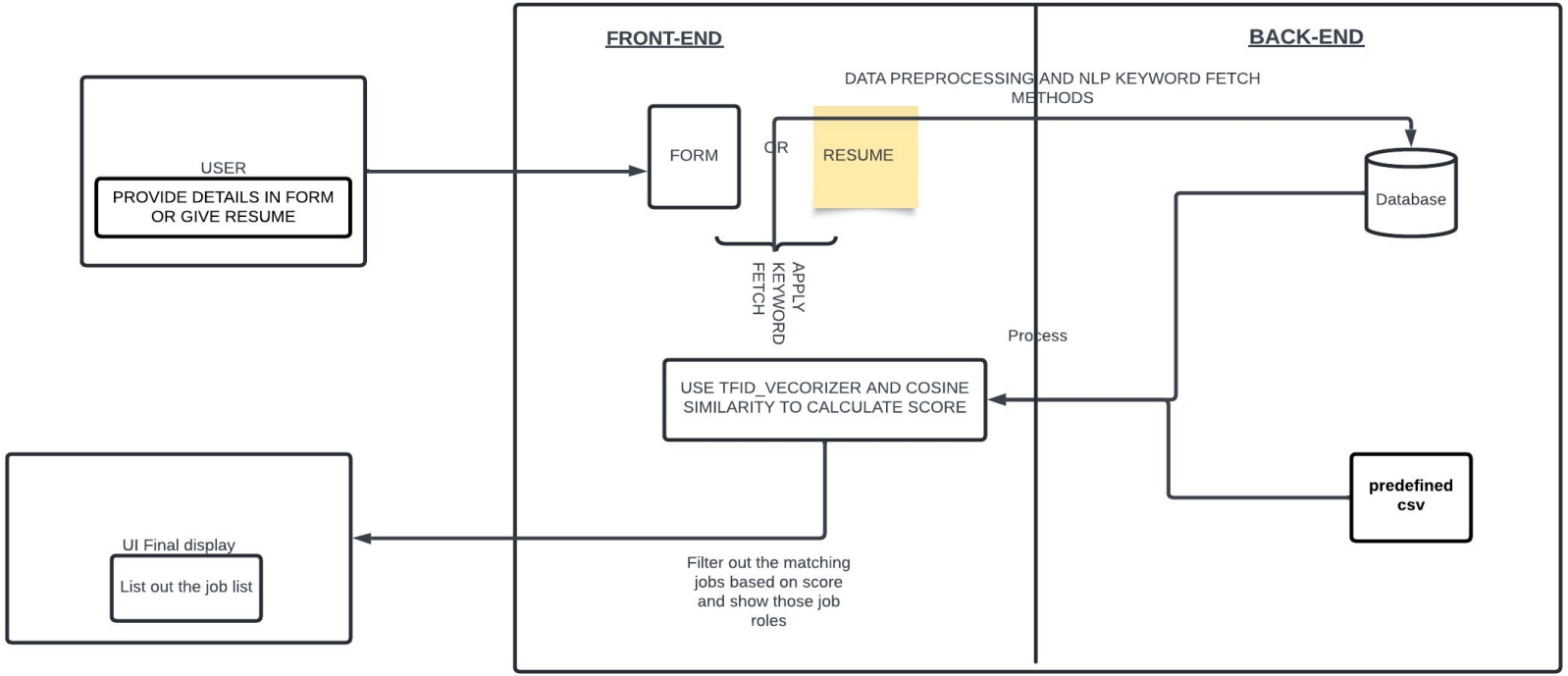
1. **DATA PREPROCESSING**:the process of detecting and correcting (or removing) corrupt or inaccurate records from a dataset.
2. **KEYWORD EXTRACTION:** Keyword extraction uses TFID Vectorisation and Cosine Similarity
3. **TFID_VECTORIZER:** term frequency-inverse document frequency ,a measure used in the fields of information retrieval (IR) and machine learning.It creates TFID Matrix with most relevant and least relevant features with the help of frequency.
4. **COSINE_SIMILARITY:** Cosine similarity is the cosine of the angle between the vectors,Using that angle to compare and recommend the job roles or skill development.It calculate score for each feature and based on preference, it gives suggestion to the user.

Methodology Used

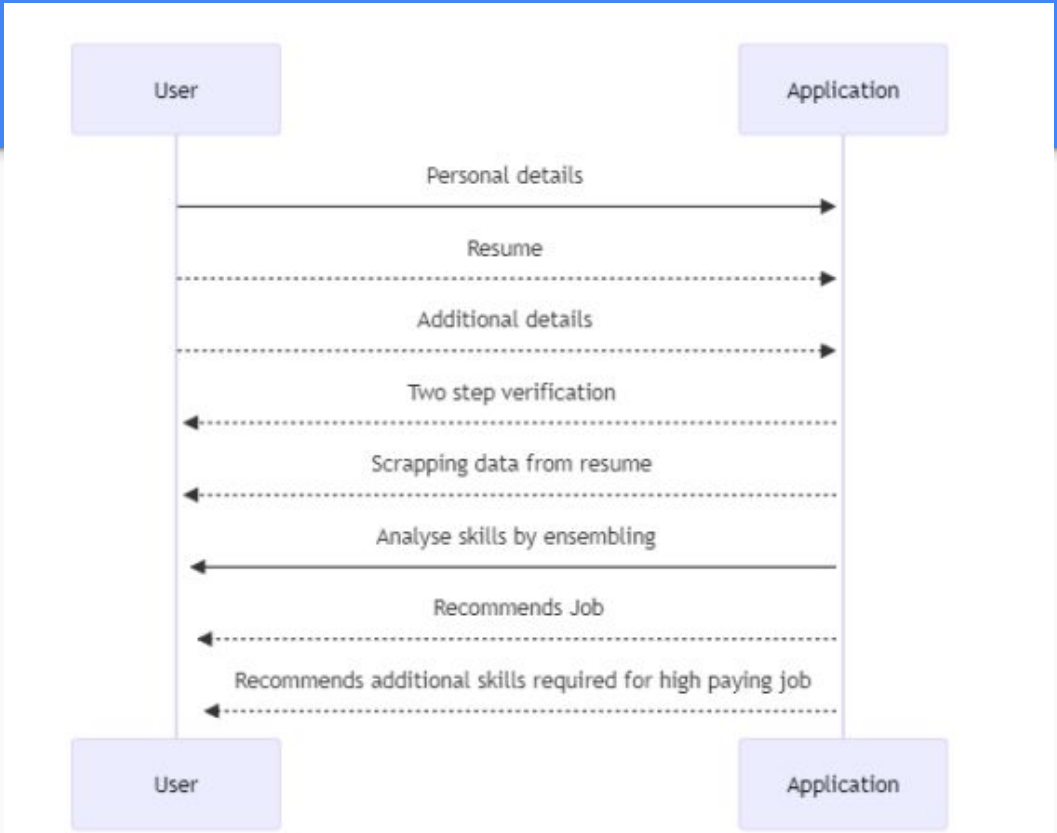
FILTERING CONTENT:

- **COLLABORATIVE FILTERING AND CONTENT FILTERING:**It uses library function WORDCLOUD and uses STOPWORD method to filter only the required data from the resume.
- **NATURAL LANGUAGE PROCESSING:** Text similarity and Keyword extraction is used for fetching information from the dataset based on the information extracted from the user's resume.Final fetching and showcasing of the result of all the job opportunities is displayed.

System Architecture Diagram

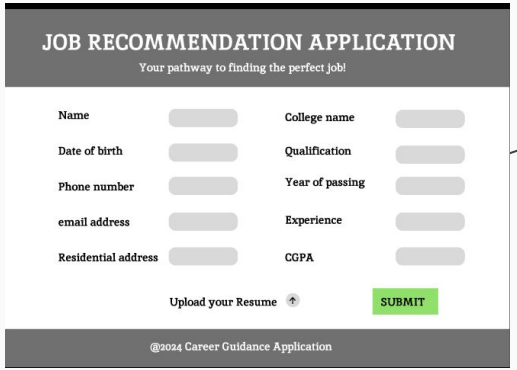


Sequence Diagram



Methodology used & How it works ?

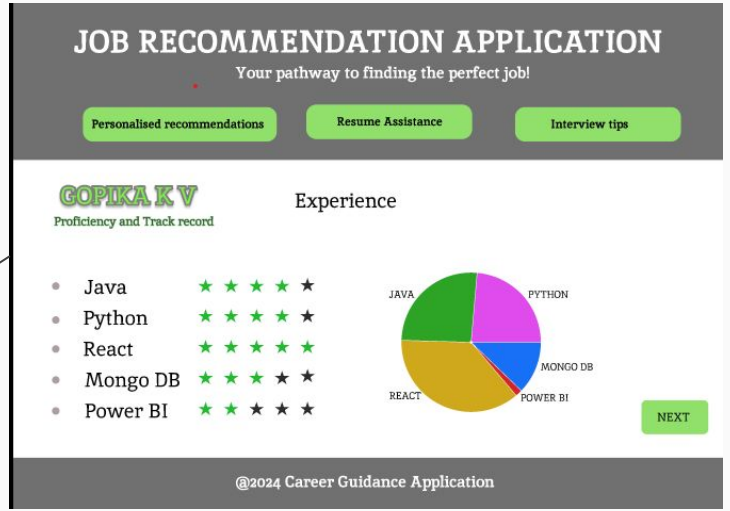
Step 1: Know about User



Via forms

Present in UI

Step 2: User details



How it works ?

Step 3: Pre-Stored data set

	Job Salary	Job Experience Req	Key Skills	Role Category	Functional Area	Industry	Job Tl
0	Not Disclosed by Rec	5 - 10 yrs	Media Planning| Dig	Advertising	Marketing , Advertisi	Advertising, PR, MR,	Media
1	Not Disclosed by Rec	2 - 5 yrs	pre sales| closing| so	Retail Sales	Sales , Retail , Busin	IT-Software, Software	Sales
2	Not Disclosed by Rec	0 - 1 yrs	Computer science| F	R&D	Engineering Design	Recruitment, Staffing	R&D E
3	2,00,000 - 4,00,000	0 - 5 yrs	Technical Support	Admin/Maintenance	IT Software - Applica	IT-Software, Software	Techr
4	Not Disclosed by Rec	2 - 5 yrs	manual testing| test	Programming & Desi	IT Software - QA & T	IT-Software, Software	Testin
5	7,00,000 - 17,00,000	5 - 7 yrs	adobe experience m	Programming & Desi	IT Software - Applica	IT-Software, Software	Syster
6	2,00,000 - 3,00,000	0 - 0 yrs	channel partners| rea	Retail Sales	Sales , Retail , Busin	Real Estate, Property	Sales
7	Not Disclosed by Rec	9 - 14 yrs	TFS| Azure| Git| VST	Programming & Desi	IT Software - Applica	IT-Software, Software	Techr
8	Not Disclosed by Rec	2 - 7 yrs	Bde	Institutional Sales	Sales , Retail , Busin	IT-Software, Software	Sales

To compare with pre-stored job skills and position present

Step 4: Use “Stopword” to fetch only meaningful data ”NLP Conceots”

How it works ?

Step 5: To compare and filter out

	Job Title	Job Experience Required	Key Skills
	Sales/Business Development Manager	4 - 5 yrs	Networking| Printing| Aerospace| Raw material...
	Software Developer	2 - 5 yrs	PHP| MVC| Laravel| AWS| SDLC| Wordpress| LAMP...
Associate/Senior Associate -(NonTechnical)		5 - 10 yrs	Data analysis| Investment banking| Financial ...
	Software Developer	1 - 6 yrs	Coding| Wordpress| Commerce| HTML| Troublesho...
Associate/Senior Associate -(NonTechnical)		1 - 4 yrs	client servicing| client support| background ...

By using Tfidvectorize and cosine_similarity compare and filter out.

How it works ?

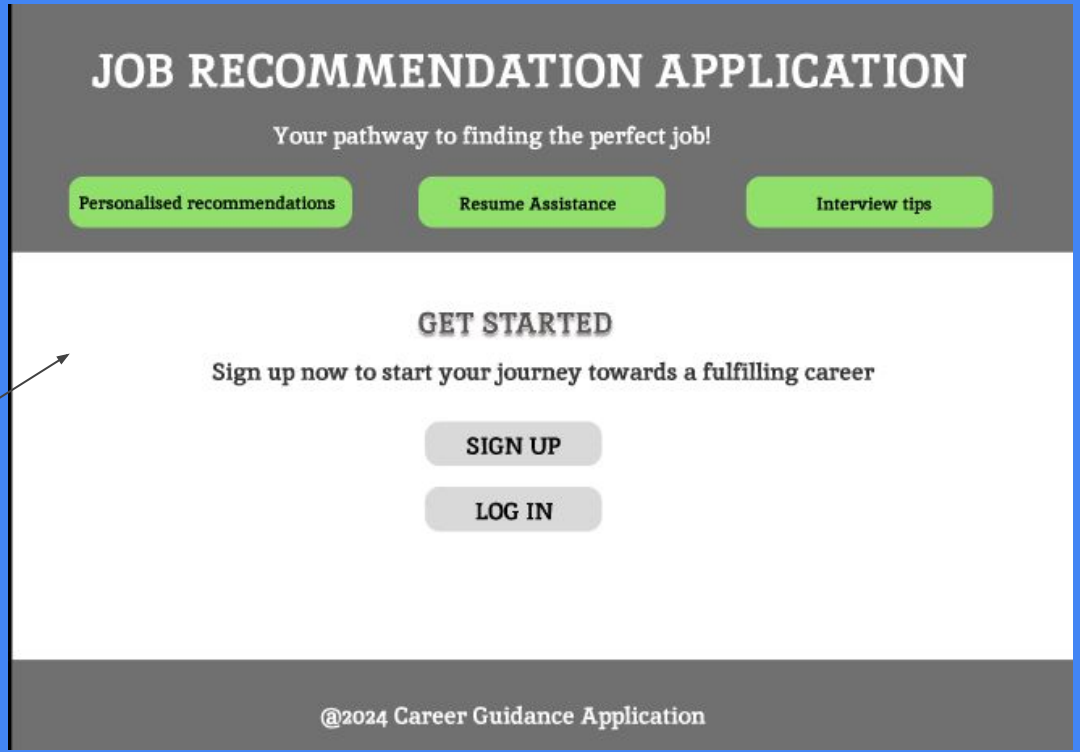
Step 5: Provide the list of roles user is eligible for

User can get the roles his resume has chances of getting selected.

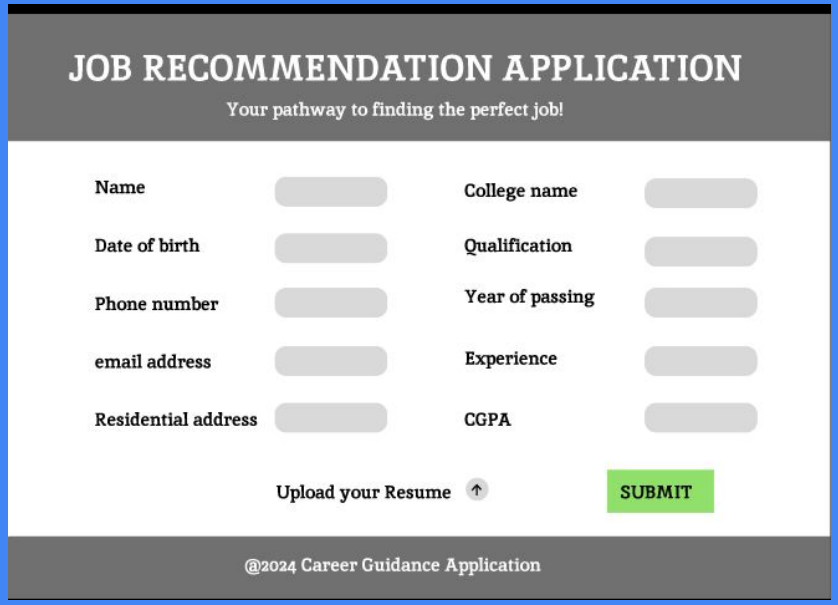

Project output
Screenshots

OUTPUT:

Sign in or log in page



OUTPUT:


JOB RECOMMENDATION APPLICATION
Your pathway to finding the perfect job!
Name
College name
Date of birth
Qualification
Phone number
Year of passing
email address
Experience
Residential address
CGPA
Upload your Resume
SUBMIT
@2024 Career Guidance Application


JOB RECOMMENDATION APPLICATION
Your pathway to finding the perfect job!
Personalised recommendations
Resume Assistance
Interview tips
GOPIKA K V
Proficiency and Track record
Experience
Java
Python
React
Mongo DB
Power BI
JAVA
PYTHON
MONGO DB
POWER BI
REACT
NEXT
@2024 Career Guidance Application

OUTPUT:


JOB RECOMMENDATION APPLICATION
Your pathway to finding the perfect job!
Welcome GOPIKA K V
B.E Computer Science and Engineering in Rajalakshmi Engineering college
2020 Graduate | CGPA: 8.5
Personalised recommendations
Resume Assistance
Interview tips
Mock interview sessions
Job openings
Advanced Technologies
@2024 Career Guidance Application


JOB RECOMMENDATION APPLICATION
Your pathway to finding the perfect job!
Recommended Roles
Experience
Java Developer
1-5 yrs
Click here
Python Developer
0-2 yrs
Click here
Full Stack Developer
0-3 yrs
Click here
Buisness Developement Manager
3-5 yrs
Click here
Data Scientist
0-2 yrs
Click here
@2024 Career Guidance Application


THANK YOU!