


Group number : 1

Project Title : Dissecting the Digital Landscape : A Comprehensive Analysis of Social Media

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Team ID : NM2023TMID00744

Team Size : 4

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1. INTRODUCTION

1.1 Project Overview

The objective of this project is to conduct a thorough analysis of the future work , specifically focusing on glassdoor jobs. The project aims to analyze the vast dataset provided by Glassdoor to uncover valuable insights, trends, and patterns related to job postings, job seekers, and employers. Glassdoor is a popular platform where employees and job seekers share information about companies, salaries, and reviews. Leveraging this data can provide valuable insights into job markets, job satisfaction, and more.

1.2 Purpose

Job Market Analysis: Glassdoor provides a rich source of information about job postings, companies, industries, and locations. Data analytics can help analyze these job listings to identify trends in job demand, skills in demand, and emerging job markets. This information is useful for job seekers, educators, and policymakers to make informed decisions regarding education and workforce development.

Salary Insights: Glassdoor data includes salary information for various job titles, industries, and locations. Data analytics can be used to uncover insights into salary trends, wage gaps, and the factors that influence compensation. This information is valuable for job seekers negotiating salaries and for employers to understand market rates.

Company Performance and Employee Satisfaction: Glassdoor is known for its employee reviews and ratings of companies. Data analytics can be employed to assess company performance, job satisfaction levels, and identify areas for improvement. Job seekers can use this information to find the best-fit employers, while companies can use it for employer branding and addressing employee concerns.

Talent Acquisition and Recruitment: Employers and HR professionals can use Glassdoor data analytics to identify what job seekers value in a company and what influences their decisions. This information is beneficial for optimizing recruitment strategies and employer branding efforts.

2. IDEATION AND PROPOSED SOLUTION

2.1 Problem statement definition

The Data Analyst at Glassdoor is responsible for providing actionable insights to support the company's mission of helping job seekers make informed career decisions

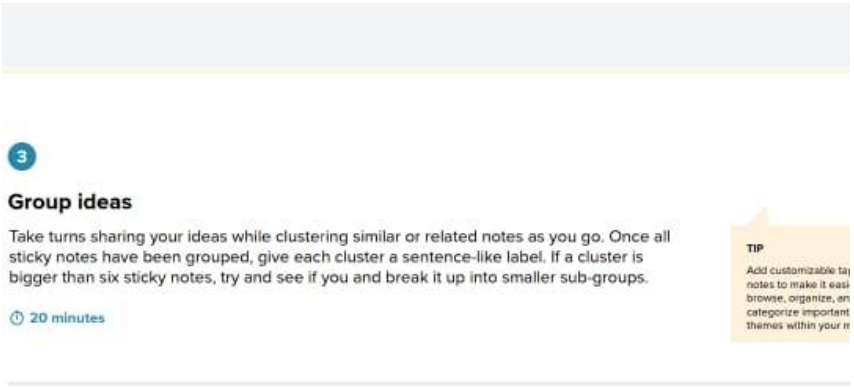
and employers to attract top talent. The primary objective of this role is to harness the power of data to drive business strategy, enhance user experiences, and optimize internal operations. The Data Analyst will work on various analytical projects to solve real-world problems and contribute to the growth and success of Glassdoor.Glassdoor aims to increase user engagement and retention on its platform. The Data Analyst will be tasked with identifying trends and patterns in user behavior, understanding what keeps users engaged, and recommending strategies to enhance user satisfaction and retention. Maintaining data quality and ensuring seamless data integration is critical for meaningful analytics. The Data Analyst will need to address data quality issues and work with various data sources to create a unified data ecosystem for robust analysis.To provide valuable insights for both job seekers and employers, the Data Analyst will be responsible for monitoring labor market trends, salary data, and employer information. They will need to develop predictive models and recommendations based on this data.Glassdoor seeks to continuously assess and improve its own operational performance. The Data Analyst will design and implement performance measurement frameworks, KPIs, and dashboards to track the company's success in various areas, such as product development, marketing, and sales. As technology evolves, the Data Analyst will explore opportunities to leverage machine learning and artificial intelligence for personalization, recommendation systems, and predictive analytics to benefit users and Glassdoor as a whole.

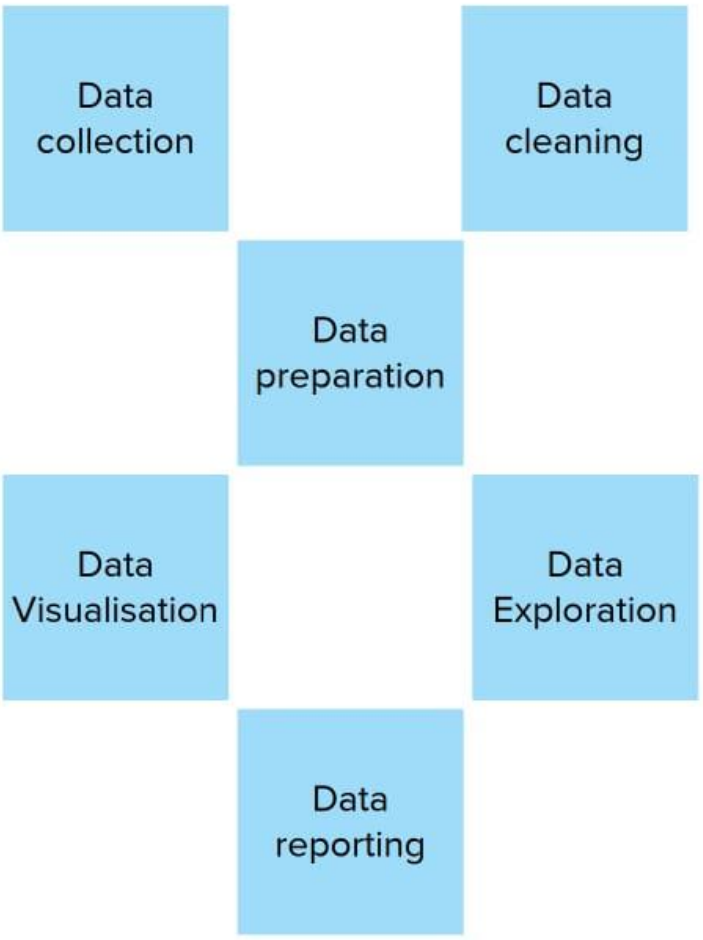
2.2 Empathy map canvas

2.3 Ideation and Brainstorming

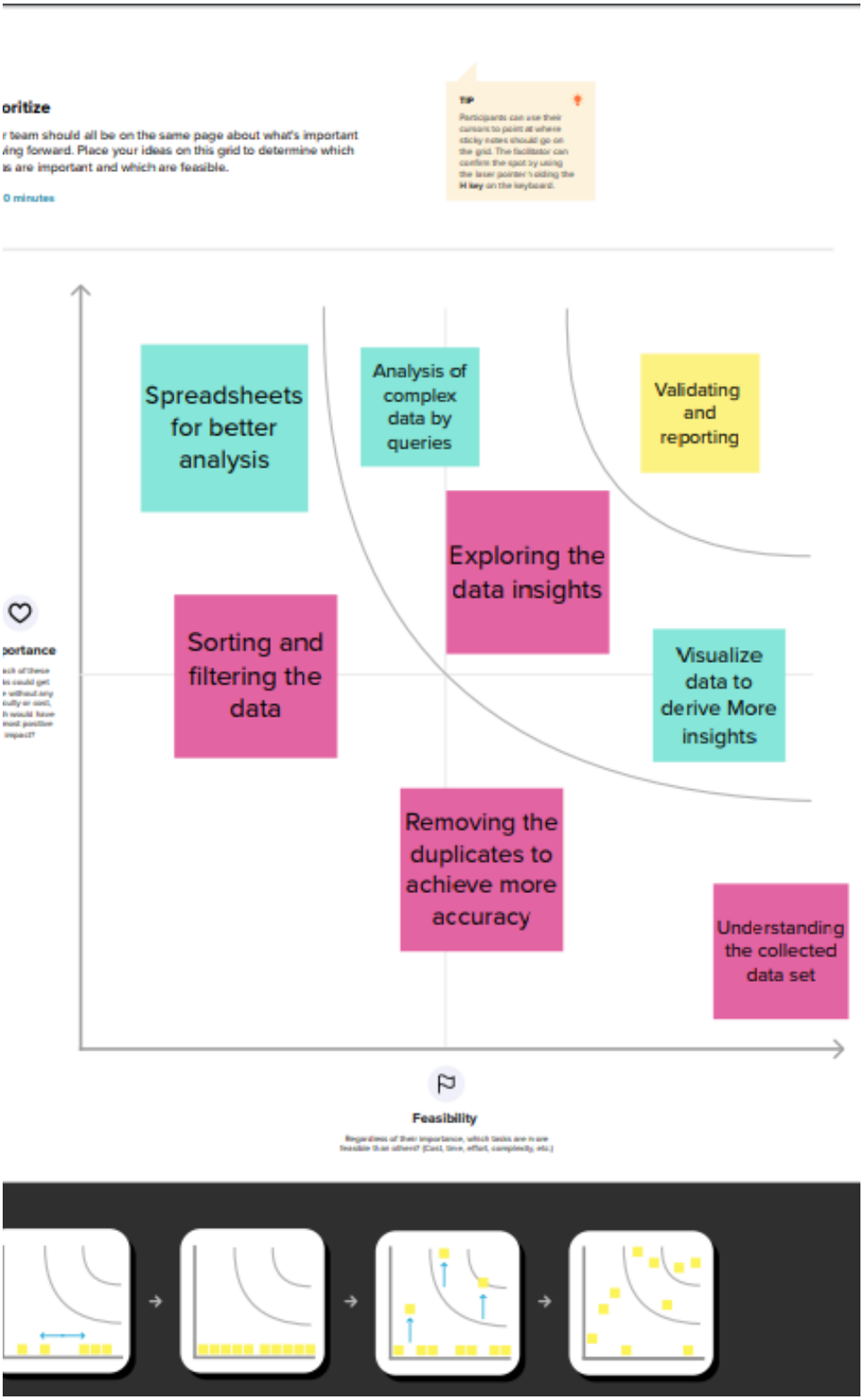
Step-1: Team Gathering, Collaboration and Select the Problem Statement

Step-2: Brainstorm, Idea Listing and Grouping





Step-3: Idea Prioritization



2.4 Proposed solution

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	analyse the complex datasets of the social media
2.	Idea / Solution description	Using analysis tool to explore and visualize datasets to gain insights
3.	Novelty / Uniqueness	Using nine basic principles of design will produce categorized & five phase involved visualization
4.	Social Impact / Customer Satisfaction	Interactive dashboards & well defined data stories will achieve the goal
5.	Business Model (Revenue Model)	Subscription-based model for clients.They will pay a recurring amount to view and access the platform
6.	Scalability of the Solution	Distributed Processing across varied datasets improve scalability

3. REQUIREMENT ANALYSIS

3.1 Functional requirement

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Dashboard	data extraction
FR-4	User Dashboard	data exploration
FR-5	User Dashboard	Visualization about specific data
FR-6	User Dashboard	Gaining Better Insights in respective domain

3.2 Non-functional Requirement

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Users can easily understand the environment and access it,their requirements will be achieved
NFR-2	**Security**	Access permission for the particular system information changed by data administrator
NFR-3	**Reliability**	The system must perform without failure in 97 percent of use cases.
NFR-4	**Performance**	Supporting 5000 users per hour must provide 1 minute or less system response time
NFR-5	**Availability**	The web dashboard will be available for the users 99.98 percent of the time every month
NFR-6	**Scalability**	The system must be scalable enough to support 1,000,000 visits at the same time

4. PROJECT DESIGN

4.1 DATA FLOW DIAGRAMS

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored

4.2 Solution and Technical Architecture

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

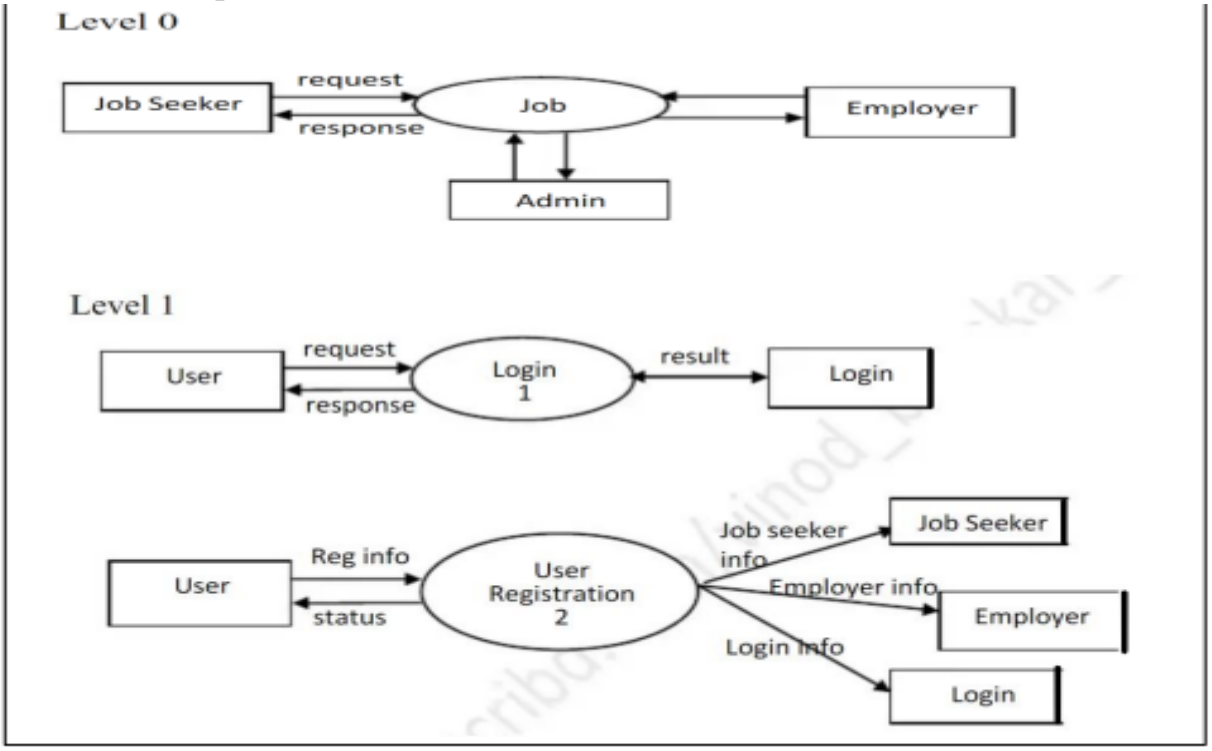


Table-1 : Components & Technologies:

S.NO	Component	Description	Technology
1.	User Interface	Web User Interface	HTML, CSS, JavaScript
2.	Application Logic-1	Visualization of current trends of facebook by analysing its data	Data analytics
3.	Database	Data Type, Configurations etc.	SQL
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
5.	File Storage	File storage requirements	Local Filesystem.
6.	External API-1	Purpose of External API used in the application	Facebook API.
7.	External API-2	Purpose of External API used in the application	IBM cognos analytics
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local Server.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Simplicity and efficient	Flask
2.	Security Implementations	Access permission for the particular system information changed by data administrator	SHA-256
3.	Scalable Architecture	The system must be scalable enough to support 1,000,000 visits at the same time	Cloud computing platform
4.	Availability	The web dashboard will be available for the users 99.98 percent of the time every month	Cloud infrastructure
5.	Performance	Supporting 5000 users per hour must provide 1 minute or less system response time	Content delivery Networks

4.2 User Stories

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Team Member
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application	My account have been created	High	Ragavi
	Login	USN-2	As a user, I can log into the application by entering email & password	I have been Login into my account	High	Sivasree
	Dashboard	USN-3	I can explore my data		Low	Preethy
		USN-4	I explored a better Data insights		Medium	Poorani Devi
		USN-5	As a user, I can log into the application by entering email & password		High	Preethy
Customer (Web user)	Login	USN-6	As a web user login to the portal and observe the data			Ragavi

5. CODING AND SOLUTIONING

5.1 Feature 1

The features of the existing system are including a user login creator to provide user interface, student performance analyser, student development card, achieved credit, passing criteria card and wise student performance attribute card. Providing the online interface for students, faculty etc. Increasing the efficiency of school record management. Decrease time required to access and deliver student records. To make the system more secure. Decrease time spent on non-value-added tasks.

The proposed system that we are going to develop will be used as the chief performance system for helping the organization in managing the whole database of the student studying in the organization. Therefore, it is expected that the database would perform functionally all the requirements that are specified.

5.2 Feature 2

The proposed system provides the student an easy and accurate data about projects and academic percentages. Students can view all the information in just one click which saves a lot of time and effort. The proposed system maintains a database to store all the information. In this system, there is no chance of losing data. Adding and searching the information is very easy which does not take much time and physical effort.

We developed a website to analyze and generate report of students based on the curriculum that represents student's academic performance. We have developed the system such that, it will automatically parse data onto the database from excel file, which will in return reduce time consumption of analysis of data.

For these we used HTML, CSS, PHP, my SQL and java script. After teacher logins into system, data is been fetched dynamically through the database. For here, parsing is done using PHP Excel. It is an inbuilt library for PHP to fetch data from excel files over or within network. We hope to accelerate the analysis by developing the analysis system. It provides assistance to teachers and administrator to track record of each student, subject and department by using various techniques such sort.

6. RESULTS

Performance Metrices:

User Growth and Reach:

- **Monthly Active Users (MAUs):** The total number of unique users who engage with Facebook on a monthly basis.Daily Active Users (DAUs): The total number of unique users who engage with Facebook on a daily basis.
- **User Demographics:** Analyze the breakdown of users by age, gender, location, and other relevant demographics to understand the platform's reach.

User Engagement: Time Spent on Platform: Average time users spend on Facebook per session or per day.

- **Daily Active Usage:** The frequency and duration of users' daily interactions with the platform.
- **Post Interactions:** Number of likes, comments, shares, and reactions on posts to gauge user engagement with content.

Content Performance:

- **Impressions:** The number of times content is displayed on users' screens.
- **Click-Through Rate (CTR):** The percentage of users who click on a post or ad after seeing it.
- **Virality:** The rate at which content is shared and reaches a wider audience.

Advertising Effectivenes:

- **Ad Impressions:** The number of times ads are displayed to users
- **Click-Through Rate (CTR):** The percentage of users who click on an ad after seeing it.
- **Conversion Rate:** The percentage of users who take a desired action (e.g., making a purchase) after clicking on an ad.

User Satisfaction and Sentiment:

- **User Surveys:** Conduct surveys to measure user satisfaction, sentiment, and feedback regarding their experience on Facebook.
- **Net Promoter Score (NPS):** Measure the likelihood of users recommending Facebook to others.

7. ADVANTAGES AND DISADVANTAGES

Advantages

Enhanced Job Matching: Glassdoor can use data analytics and machine learning to provide more accurate and personalized job recommendations, helping job seekers find the right fit more efficiently.

Real-Time Salary Data: Glassdoor can continue to provide up-to-date salary and compensation information, helping job seekers negotiate better compensation packages and stay informed about industry standards.

Trends and Insights: Glassdoor can leverage its data to provide valuable insights into job market trends, emerging skills, and industry-specific information, empowering job seekers to make informed career decisions.

Improved Company Research: Glassdoor can expand its database of company profiles and reviews, offering more comprehensive and up-to-date information about employer reputations and workplace cultures.

Advanced Analytics for Employers: Employers can benefit from advanced analytics tools that help them understand their standing in the job market, allowing them to make improvements in their recruitment and retention strategies.

User Engagement and Community Building: Glassdoor can enhance its platform to foster a sense of community among job seekers and employees, enabling them to share insights, advice, and support one another in their career journeys.

Geospatial Analysis: Analyzing job market data geospatially can provide job seekers with insights into the best locations for their chosen professions, taking into account regional job availability and salary ranges.

Disadvantages

No Personalized Recommendations: Glassdoor's recommendations are based on general job criteria and don't necessarily provide highly personalized job matches. Users may still need to invest time in sifting through listings.

Focus on Larger Companies: Glassdoor tends to have more information on larger and well-known companies. Smaller businesses or startups may not have as much data available, limiting job seekers' insights into these organizations.

Limited Insights into Non-Office Roles: Glassdoor is more oriented towards office-based roles, and there may be limited information available for jobs in fields such as skilled trades, retail, or manufacturing.

Advertisement Influence: Companies can pay to advertise on Glassdoor, which may impact the visibility and placement of their job listings and reviews. Influence of Competitors and Disgruntled Employees: Some reviews on Glassdoor may be influenced by competitors or employees with grievances against a company. It can be difficult to discern genuine feedback from biased or malicious intent.

Anonymity: The option for reviewers to remain anonymous can encourage more candid feedback, but it can also lead to a lack of accountability for potentially misleading or defamatory reviews.

Changes Over Time: Companies and their work cultures can change over time, but Glassdoor may not always reflect these changes. Older reviews may not accurately represent the current state of a company.

8. CONCLUSION

In conclusion, the future work of glassdoor job has provided a nuanced understanding of the platform's advantages, disadvantages, and potential areas for improvement . Glassdoor can be a valuable tool for researching companies and job opportunities, it should be used as one of several resources to form a well-informed decision. Remember that individual experiences vary, and it's essential to consider the broader context and your own preferences when drawing conclusions about a job or employer **.**Glassdoor is a popular website that provides information about jobs, companies, and workplace culture, allowing employees to share their experiences and insights. When it comes to drawing conclusions from Glassdoor job reviews, it's essential to approach the information with a critical perspective. The number of reviews for a particular company or job position can vary significantly. A conclusion drawn from a few reviews may not be representative of the overall employee experience.Reviews can be highly subjective, reflecting the individual experiences, opinions, and biases of the reviewers. What one person dislikes about a company might not bother someone else. The job market and company culture can change over time. A company that received negative reviews a few years ago might have improved since then. Always look for the most recent reviews for a more accurate picture. Company cultures and job experiences can vary widely by industry and location. A company's reputation and work environment in one city or industry may be quite different elsewhere.Glassdoor provides filters and aggregated ratings that can help you get a more comprehensive view of a company. Pay attention to overall ratings, pros and cons, and trends in reviews.Consider how companies respond to reviews on Glassdoor. Some companies actively engage with reviewers to address concerns, which can be a positive sign.To form a more balanced conclusion, read both positive and negative reviews. Look for recurring themes and common issues raised by employees.Glassdoor should not be the only source of information. Check other job

review websites, talk to current or former employees if possible, and gather information from multiple sources.What might be an ideal job or company for one person may not be the same for another. Consider your own priorities, values, and career goals when interpreting Glassdoor reviews

9.FUTURE WORK

Enhanced Job Matching: Glassdoor can leverage data analytics to improve its job matching capabilities. By analyzing user profiles and job preferences, it can provide more personalized job recommendations to users, increasing the likelihood of finding the right job fit.

Salary and Compensation Analytics: Glassdoor has been known for its salary and compensation data. In the future, it could use data analytics to provide more in-depth and real-time insights into compensation trends, helping job seekers negotiate better salaries.

Predictive Analytics for Job Market Trends: Glassdoor can use data analytics to forecast job market trends and emerging skill requirements. This information can be valuable for both job seekers and employers looking to understand the evolving job landscape.

Natural Language Processing (NLP): NLP can be employed to analyze and summarize job reviews and company profiles.

Github and Project Video Demo link

Video Link: Glass Future Website

Github Link: https://github.com/srmadhu29/NM-SEM-7.git