



**THE FUTURE OF WORK:  
DATA ANALYSIS OF GLASSDOOR**



**IBM NAAN MUDHALVAN  
DATA ANALYTICS**

**PROJECT REPORT**

*Submitted By*

**SHABARI VASAN GK (611220104135)**

**SURJIT KUMAR A (611220104158)**

**VARSHINI S (611220104166)**

**VEERAGOWSHIKA S (611220104167)**

**VIGNESH C (611220104168)**

*in partial fulfillment for the award of the degree  
of*

**BACHELOR OF ENGINEERING  
*in*  
COMPUTER SCIENCE AND ENGINEERING**

**KNOWLEDGE INSTITUTE OF TECHNOLOGY,**

**SALEM-637504**

**ANNA UNIVERSITY: CHENNAI 600 025**

**NOVEMBER 2023**



**THE FUTURE OF WORK:  
DATA ANALYSIS OF GLASSDOOR**



**IBM NAAN MUDHALVAN  
DATA ANALYTICS**

**PROJECT REPORT**

*Submitted By*

|                         |                       |
|-------------------------|-----------------------|
| <b>SHABARI VASAN GK</b> | <b>(611220104135)</b> |
| <b>SURJIT KUMAR A</b>   | <b>(611220104158)</b> |
| <b>VARSHINI S</b>       | <b>(611220104166)</b> |
| <b>VEERAGOWSHIKA S</b>  | <b>(611220104167)</b> |
| <b>VIGNESH C</b>        | <b>(611220104168)</b> |

*in partial fulfillment for the award of the degree  
of*

**BACHELOR OF ENGINEERING  
*in*  
COMPUTER SCIENCE AND ENGINEERING**

**KNOWLEDGE INSTITUTE OF TECHNOLOGY,**

**SALEM-637504**

**ANNA UNIVERSITY: CHENNAI 600 025**

**NOVEMBER 2023**

## **BONAFIDE CERTIFICATE**

Certified that this report titled **“THE FUTURE OF WORK: DATAANALYSIS OF GLASSDOOR”** is the bonafide work of **“SHABARIVASAN GK(611220104135),VARSHINI S(611220104166), VEERAGOWSHIKA S(611220104167),VIGNESH C(611220104168), SURJIT KUMAR A(611220104158)”** who carried out the project work under my supervision.

### **SIGNATURE**

Dr. V. KUMAR M.E., Ph.D.,

### **HEAD OF THE DEPARTMENT**

### **PROFESSOR**

Department of Computer Science  
and Engineering,  
Knowledge Institute of Technology,  
Kakapalayam,  
Salem- 637 504.

### **SIGNATURE**

Mrs. M.GOPIKUMARAN M.E.,

### **FACULTY MENTOR**

### **ASSISTANT PROFESSOR**

Department of Computer Science  
and Engineering,  
Knowledge Institute of Technology,  
Kakapalayam,  
Salem- 637 504.

-----  
**SPOC**

-----  
**HEAD OF THE DEPARTMENT**

## ACKNOWLEDGEMENT

At the outset, we express our heartfelt gratitude to **GOD**, who has been our strength to bring this project to light.

At this pleasing moment of having successfully completed our project, we wish to convey our sincere thanks and gratitude to our beloved president **Mr. C. Balakrishnan**, who has provided all the facilities to us.

We would like to convey our sincere thanks to our beloved Principal **Dr. PSS. Srinivasan**, for forwarding us to do our project and offering adequate duration in completing our project.

We express our sincere thanks to our Head of the Department **Dr. V. Kumar**, Department of Computer Science and Engineering for fostering the excellent academic climate in the Department.

We express our pronounced sense of thanks with deepest respect and gratitude to our Faculty Mentor **Mr. M. Gopikumaran**, Assistant Professor, Department of Computer Science and Engineering for his valuable and precious guidance and for having amicable relation.

With deep sense of gratitude, we extend our earnest and sincere thanks to our SPOC **Mr. T. Karthikeyan**, Assistant Professor, Department of Computer Science and Engineering for her guidance and encouragement during this project.

We would also like express our thanks to all the faculty members of our department, friends and students who helped us directly and indirectly in all aspects of the project work to get completed4 successfully.

## **TABLE OF CONTENTS**

| <b>CHAPTER<br/>NO.</b> | <b>TITLE</b>                            | <b>PAGE<br/>NO.</b> |
|------------------------|---|---------------------|
|                        | <b>ABSTRACT</b>                         | <b>I</b>            |
|                        | <b>LIST OF FIGURES</b>                  | <b>II</b>           |
|                        | <b>LIST OF ABBREVIATIONS</b>            | <b>III</b>          |
| <b>1</b>               | <b>INTRODUCTION</b>                     | <b>1</b>            |
|                        | 1.1 PROJECT OVERVIEW                    | 1                   |
|                        | 1.2 PURPOSE                             | 2                   |
| <b>2</b>               | <b>LITERATURE SURVEY</b>                | <b>3</b>            |
| <b>3</b>               | <b>IDEATION &amp; PROPOSED SOLUTION</b> | <b>5</b>            |
|                        | 3.1 PROBLEM STATEMENTS DEFINITION       | 5                   |
|                        | 3.2 EMPATHY MAP CANVAS                  | 7                   |
|                        | 3.3 IDEATION & BRAINSTORMING            | 8                   |
|                        | 3.4 PROPOSED SOLUTION                   | 10                  |
| <b>4</b>               | <b>REQUIREMENT ANALYSIS</b>             | <b>13</b>           |
|                        | 4.1 FUNCTIONAL REQUIREMENT              | 13                  |
|                        | 4.2 NON -FUNCTIONAL REQUIREMENT         | 15                  |
| <b>5</b>               | <b>PROJECT DESIGN</b>                   | <b>17</b>           |
|                        | 5.3 DATA FLOW DIAGRAMS                  | 17                  |

|           |   |           |
|-----------|---|-----------|
|           | 5.2 SOLUTION & TECHNOLOGY ARCHITECTURE      | 18        |
|           | 5.3 USER STORIES                            | 19        |
| <b>6</b>  | <b>CODING &amp; SOLUTIONING</b>             | <b>27</b> |
|           | 6.1 FEATURE 1                               | 27        |
|           | 6.2 FEATURE 2                               | 27        |
| <b>7</b>  | <b>RESULTS</b>                              | <b>28</b> |
|           | 7.1 PERFORMANCE METRICS                     | 28        |
| <b>8</b>  | <b>ADVANTAGES &amp; DISADVANTAGES</b>       | <b>29</b> |
| <b>9</b>  | <b>CONCLUSION</b>                           | <b>31</b> |
| <b>10</b> | <b>FUTURE SCOPE</b>                         | <b>32</b> |
| <b>11</b> | <b>APPENDIX</b>                             | <b>33</b> |
|           | A.1 SOURCE CODE                             | 33        |
|           | A.2 SCREEN SHOTS                            | 37        |
|           | <b>GITHUB &amp; PROJECT VIDEO DEMO LINK</b> | <b>46</b> |
|           | <b>REFERENCE</b>                            | <b>47</b> |

ABSTRACT

---

## **ABSTRACT**

This study examines the role of culture and employee satisfaction on company performance. Through the analysis of 1.2 million Glassdoor reviews using machine learning techniques, the study identifies nine cultural dimensions that impact company performance. However, the impact of culture on performance varies across industries, and organizations should prioritize industry-specific cultural dimensions to drive performance. Employee satisfaction has a strong correlation with company performance, highlighting the importance of a healthy work environment.

Organizations should prioritize cultural elements such as innovation, respect, customer focus, and performance rewards to drive both employee satisfaction and company performance. The findings suggest that organizations should focus on enhancing culture and employee satisfaction to drive performance. However, further research is necessary on a more extensive and diverse dataset that accounts for industry-specific effects. The study provides valuable insights into the role of culture and employee satisfaction in driving company performance, which has significant implications for organization.



## LIST OF FIGURES

| <b>FIGURE<br/>NO</b> | <b>NAME OF FIGURE</b> | <b>PAGE<br/>NO</b> |
|----------------------|-----------------------|--------------------|
| 3.2.1                | Empathy Map           | 7                  |
| 3.3.1                | Brain Storming        | 8                  |
| 5.1.1                | Data Flow             | 17                 |
| 5.1.1                | Solution Architecture | 18                 |
| A.2.1                | Web Page Screen Shot  | 37                 |
| A.2.2                | Dashboard Screen Shot | 38                 |
| A.2.3                | Report                | 41                 |
| A.2.4                | Story                 | 43                 |

## LIST OF ABBREVIATIONS

| ABBREVIATION | EXPANSION                    |
|--------------|------------------------------|
| NPL          | National physical laboratory |
| HTML         | Hypertext markup language    |
| CSV          | Comma separated values       |

## INTRODUCTION

---

# CHAPTER 1

## INTRODUCTION

### 1.1 Project Overview

This study examines the role of culture and employee satisfaction on company performance. Through the analysis of 1.2 million Glassdoor reviews using machine learning techniques, the study identifies nine cultural dimensions that impact company performance. The findings demonstrate that several cultural dimensions, such as customer focus, innovation, performance rewards, and integrity, positively impact company performance.

However, the impact of culture on performance varies across industries, and organizations should prioritize industry-specific cultural dimensions to drive performance. Employee satisfaction has a strong correlation with company performance, highlighting the importance of a healthy work environment.

Organizations should prioritize cultural elements such as innovation, respect, customer focus, and performance rewards to drive both employee satisfaction and company performance. The findings suggest that organizations should focus on enhancing culture and employee satisfaction to drive performance. However, further research is necessary on a more extensive and diverse dataset that accounts for industry-specific effects. The study provides valuable insights into the role of culture and employee satisfaction in driving company performance, which has significant implications for organizations.

## **1.2 Purpose**

Glassdoor can also help employers understand the needs and expectations of their employees and potential candidates, which can be particularly important as the job market becomes increasingly competitive and the war for talent heats up.

Overall, Glassdoor has the potential to play a valuable role in shaping the future of work by providing both job seekers and employers with the information and insights they need to make informed decisions about their careers and businesses.

Glassdoor is a website that provides information about job listings, company reviews, salaries, and interview questions. It aims to help job seekers make informed decisions about potential employers and provides employers with insights on how they can improve their reputation and attract top talent.

In terms of the future of work, Glassdoor is well-positioned to play an important role in shaping the way we approach work. As more companies move towards remote work, and employees demand greater transparency and fairness in the workplace, Glassdoor's platform can provide a wealth of information and insights to help job seekers navigate these changes.

LITERATURE SURVEY

---

## **CHAPTER 2**

### **LITERATURE SURVEY**

#### **2.1 Employee Contentment and Business Performance [ Ning Luo ,Yilu Zhou ,John J. Shon]**

The study uses Big Data from social media to examine the relation between employee satisfaction and corporate performance by analyzing anonymous employee reviews from Glassdoor.com. The research reveals the specific aspects of employee satisfaction responsible for driving the correlations and the categories that are negatively correlated with performance. The study confirms the significant correlation between overall employee satisfaction and corporate performance and encourages other researchers to consider using text analytics to examine unconventional metrics that may drive firm valuation. Overall, the study contributes to the growing field of Big Data research and sheds light on the significant improvements in research design that are possible by utilizing text mining methodology.

#### **2.2 Glassdoor Company Review Analysis with NLP**

The Glassdoor Company Review Analysis with NLP project analyzes employer reviews for a large company with the goal of creating a workflow for similar tasks and providing insights for employers on employee engagement. Through data cleaning, sentiment analysis, and topic modeling, the project identifies what employees like and dislike about the company, assesses its reputation, determines the keywords employees use, and makes recommendations for improving employee engagement. The project's reusable code and structure can be applied to any company with Glassdoor reviews. The project has limitations and future work could include comparing this company to its competitors. The project acknowledges Glassdoor and the author's mentor.

### **2.3 Predicting Company Ratings through Glassdoor Reviews [Fabian Frederik Frank, Tyler Emerson Whittle]**

The paper explores the development of a model to predict employee sentiment based on text in employee review data from Glassdoor.com. As employee perceptions of culture and managerial integrity are associated with financial performance, managers need to interface effectively with employees. The model aims to accurately predict the quantitative rating of employee reviews, enriching reviews and enabling comparisons between different reviews. The paper explains the approach and frameworks used, including the implementation of the Naïve Bayes classifier, 1-ReLU and 2-ReLU networks, and Long-Short Term Memory (LSTM) Recurrent Neural Network. The paper concludes that the model provides organizations with a new avenue to examine unstructured text generated by their employees, such as internal quarterly reviews.

### **2.4 Using Glass Door Data to Measure the Impact of Culture and Employee Satisfaction on Performance [Linnea H.R. Uyeno ,Professor Garin]**

Researchers may have collected data from Glassdoor on various companies and their reviews, looking for patterns such as certain keywords or themes that consistently came up. They may have also compared employee satisfaction ratings to other metrics to see if there was a correlation between culture and performance. The study's results could provide valuable insights into how company culture affects employee satisfaction and performance, suggesting that prioritizing employee well-being and creating a supportive, collaborative culture is beneficial for business outcomes.





## CHAPTER 3

### IDEATION & PROPOSED SOLUTION

#### 3.1 Problem Statement Definition

A Glass door Jobs Data Analysis project would likely involve collecting and analysing job data from the Glass door website. This could include information such as job titles, salaries, company rating and job descriptions. The goal of the project would likely be to uncover insights and trends in the job market, such as popular job titles, average salaries, and in-demand skills. The data collected could also be used to make predictions about future job market trends or to identify which companies are offering the best compensation packages.



| <b>Problem Statement (PS)</b> | <b>I am (Customer)</b> | <b>I'm trying to</b> | <b>But</b>            | <b>Which makes me feel</b> |
|-------------------------------|------------------------|----------------------|-----------------------|----------------------------|
| <b>PS -1</b>                  | User                   | Seeking a Job        | Site not responding   | Anxiety                    |
| <b>PS -2</b>                  | User (Agent)           | Solve Problem        | No longer unavailable | Frustrated                 |
| <b>PS -3</b>                  | User (Admin)           | Backup Data          | System Failure        | Cumbersome                 |
| <b>PS -4</b>                  | User                   | Looking for Status   | Agent Not Updated     | Stressed                   |

### 3.2 EMPATHY MAP CANVAS

An empathy map is a collaborative tool teams can use to gain a deeper insight into their customers. Much like a user persona, an empathy map can represent a group of users, such as a customer segment. The empathy map was originally created by Dave Gray and has gained much popularity within the agile community. Have the team members speak about the sticky notes as they place them on the empathy map. Ask questions to reach deeper insights so that they can be elaborated for the rest of the team. To help bring the user to life, you may even wish to sketch out the characteristics this person may have on the center of the face.

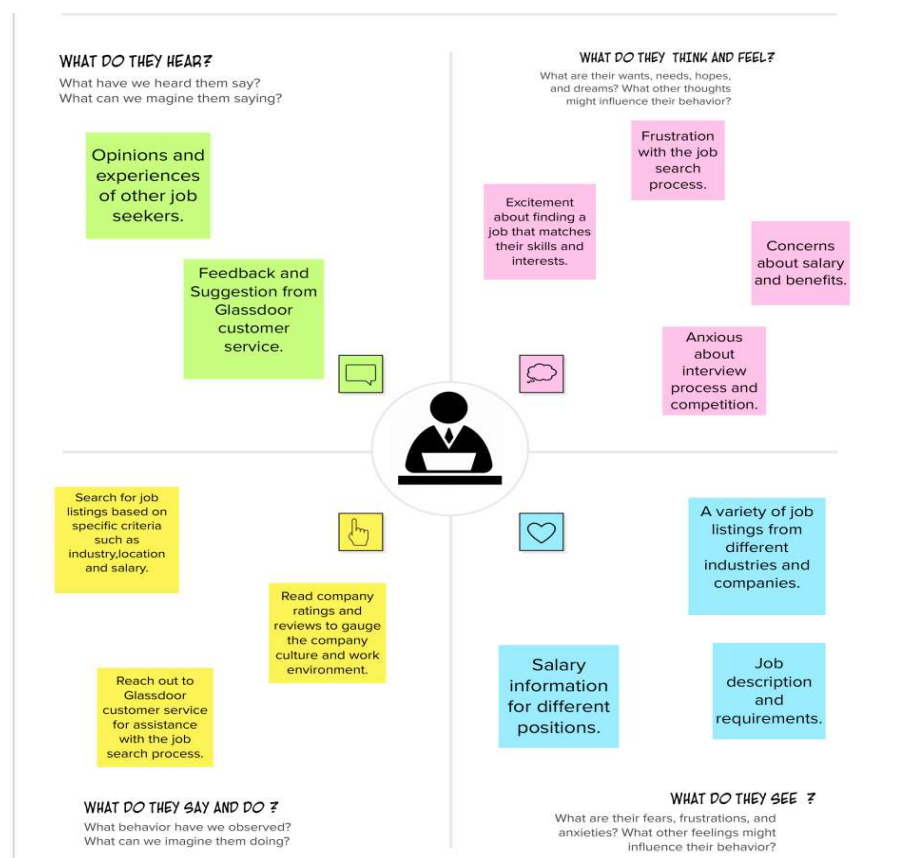



Figure 3.2.1 Empathy map.

### 3.3 IDEATION AND BRAIN STROMING

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome.

Template



## Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 🕒 10 minutes to prepare
- 👥 1 hour to collaborate
- 👤 2-8 people recommended

[Share template feedback](#)

➔

### Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

A

**Team gathering**  
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B

**Set the goal**  
Think about the problem you'll be focusing on solving in the brainstorming session.

C

**Learn how to use the facilitation tools**  
Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) ➔

1


### Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

🕒 5 minutes

PROBLEM

A Green door Jobs Data Analysis project would likely involve collecting and analyzing job data from the Green door website. This could include information on such as job titles, salaries, company rating and job descriptions. The goal of the project would likely be to uncover insights and trends in the job market, such as popular job titles, average salaries, and in-demand skills. The data collected could also be used to make predictions about future job market trends or to identify which companies are offering the best compensation packages.

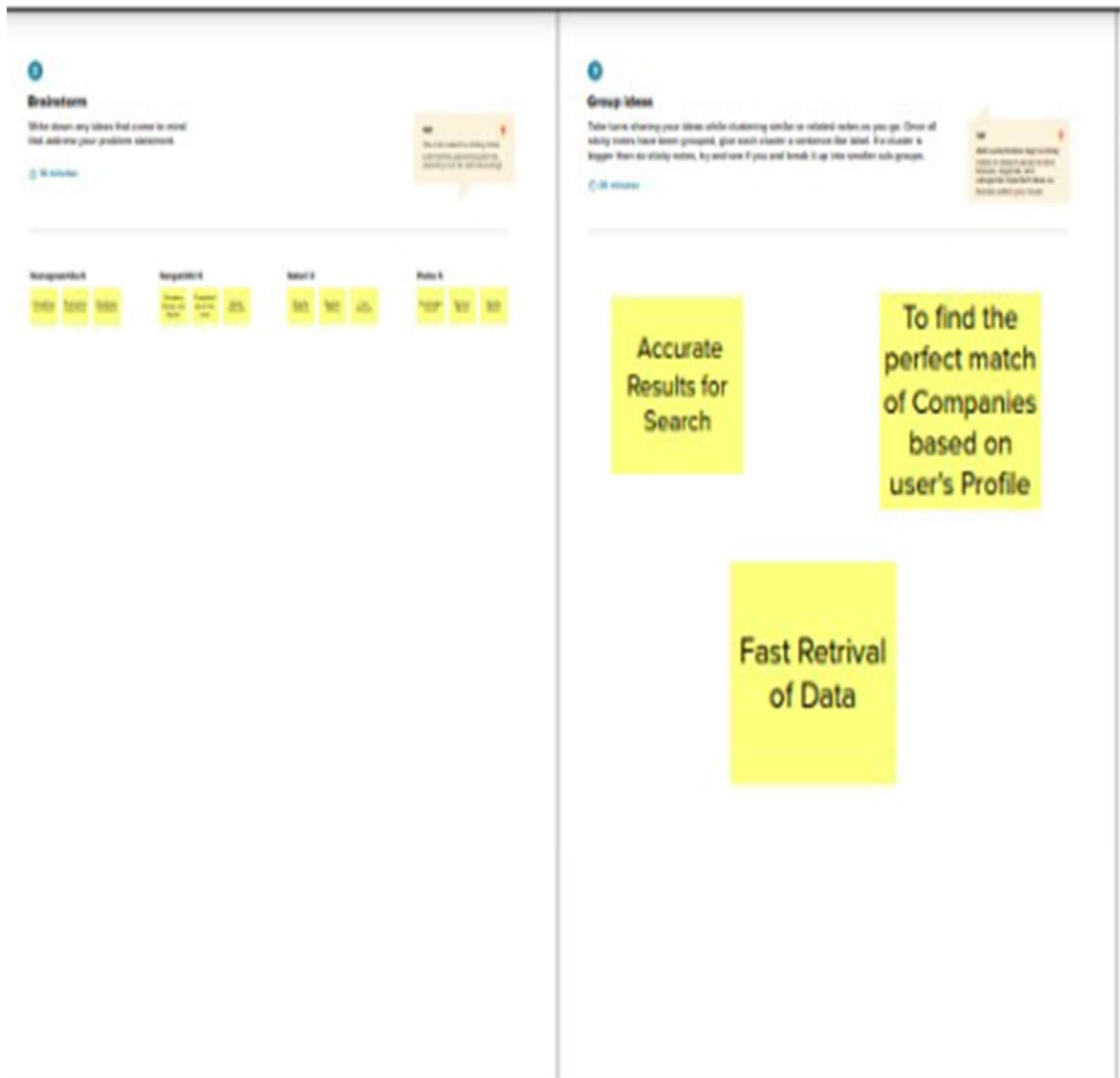


### Key rules of brainstorming

To run a smooth and productive session

|                    |                            |
|--------------------|----------------------------|
| 🗣️ Stay in topic.  | 💡 Encourage wild ideas.    |
| ⏸️ Defer judgment. | 👂 Listen to others.        |
| 📢 Go for volume.   | 👁️ If possible, be visual. |

Figure 3.3.1 Brain Storming.



**Figure 3.3.1** Brain Storming.

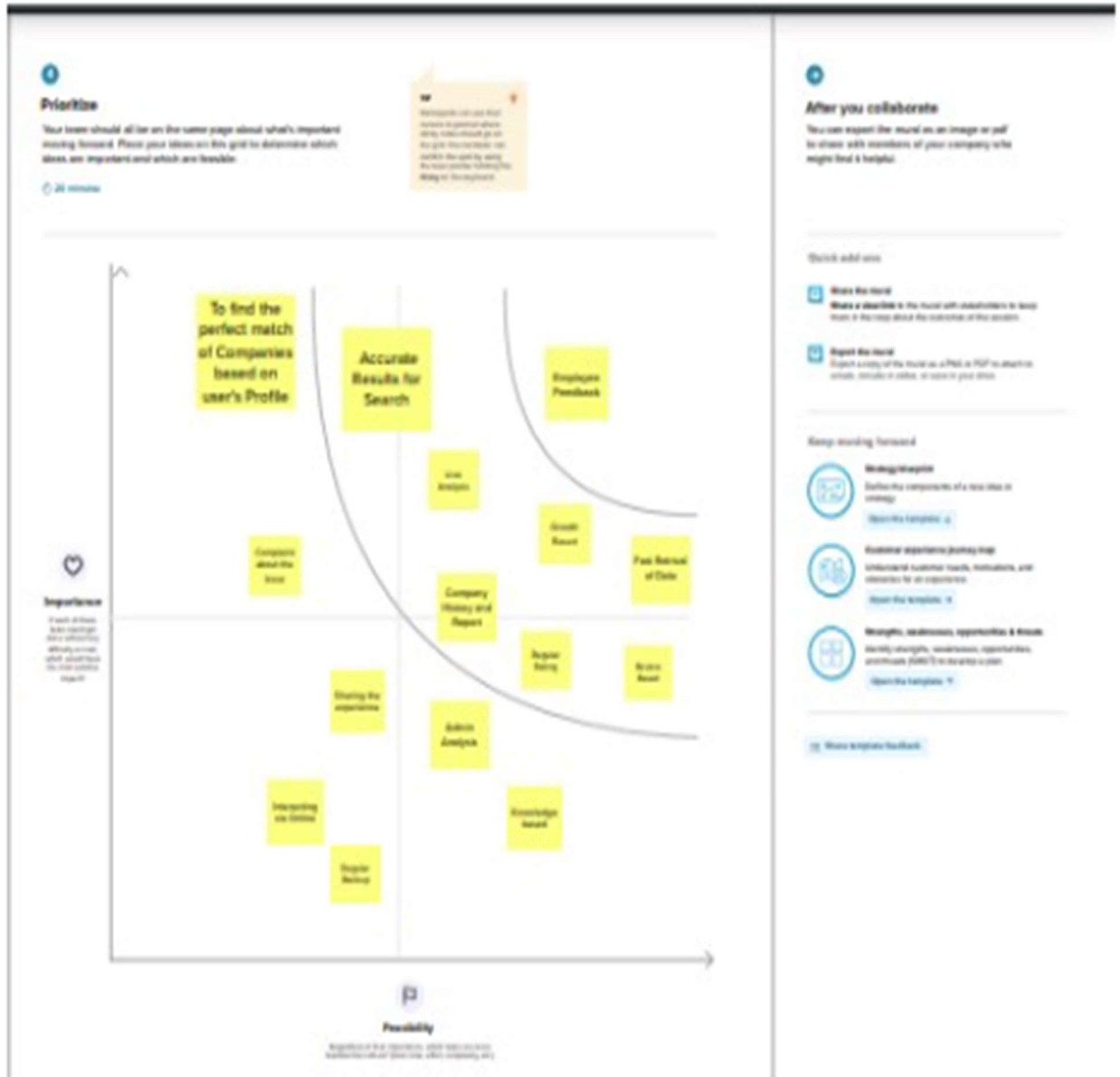


Figure 3.3.1 Brain Storming.

### 3.4 PROPOSED SOLUTION

| S.No. | Parameter                                       | Description  |
|-------|---|--|
| 01.   | <b>Problem Statement (Problem to be solved)</b> | A Glass door Jobs Data Analysis project would likely involve collecting and analyzing job data from the Glass door website. This could include information such as job titles, salaries, company rating and job descriptions. The goal of the project would likely be to uncover insights and trends in the job market, such as popular job titles, average salaries, and in-demand skills. The data collected could also be used to make predictions about future job market trends or to identify which companies are offering the best compensation packages. |
| 02.   | <b>Idea / Solution description</b>              | <ul style="list-style-type: none"> <li>● Prevention of Fake Reviews.</li> <li>● Expand Company Insights.</li> <li>● Provide more Career Resources like advice, Interview tips, Specialist Interaction and Resume Templates for users.</li> </ul>   |
| 03.   | <b>Novelty / Uniqueness</b>                     | Glassdoor also provides data-driven Insights and Analytics for businesses, allowing them to make data-driven decisions based on Employee feedback.   |
| 04.   | <b>Social Impact / Customer Satisfaction</b>    | User Satisfaction, Job Seekers can track their Jobs or any Internships based on their Skills. Easy additional income and freelancing opportunities.  |
| 05.   | <b>Business Model (Revenue</b>                  | <ul style="list-style-type: none"> <li>● Employer Branding: Glassdoor Offers employer</li> </ul>   |



|            |                                    |   |
|------------|------------------------------------|---|
|            | <b>Model)</b>                      | <p>branding solutions to help companies showcase their brand and attract top talent.</p> <ul style="list-style-type: none"> <li>● Job Advertising: Glassdoor offers job postings service for companies to advertise their job openings to targeted audiences of job seekers.</li> <li>● Partnership and Advertising: Glassdoor also generates revenue through partnership and advertising.</li> </ul> |
| <b>06.</b> | <b>Scalability of the Solution</b> | <p>The real goal of scaling user service is providing an environment that will allow your user service specialists to be as efficient as possible. An environment where they will be able to spend less time on grunt work and more time on actually resolving critical user services.</p>  |



## CHAPTER 4

### REQUIREMENT ANALYSIS

#### 4.1 FUNCTIONAL REQUIREMENTS

Following are the functional requirements of the proposed solution.

| <b>FR.NO</b> | <b>Functional Requirement (Epic)</b> | <b>Sub Requirement (Story Sub-Task)</b>  |
|--------------|--------------------------------------|--|
| <b>FR.1</b>  | <b>Data Collection</b>               | The data analysis process for Glassdoor jobs would require the collection of data on job postings from websites. This data includes job title, description, company name, location, and reviews. |
| <b>FR.2</b>  | <b>Data Cleaning</b>                 | Once the data is Collected, it needs to be cleaned to remove any errors or inconsistencies. This may involve removing duplicates, correcting misspelled words, and standardizing data format.    |
| <b>FR.3</b>  | <b>Data Preparation</b>              | After cleaning, the data needs to be prepared for analysis. This may involve transforming data into a suitable format for analysis, such as converting categorical data into numerical data.     |
| <b>FR.4</b>  | <b>Data Analysis</b>                 | Once the data is Cleaned and Prepared, it can be analyzed using various statistical techniques. This may involve   |

|             |                           |  |
|-------------|---------------------------|--|
|             |                           | exploratory data analysis, regression analysis and Clustering analysis to identify patterns and insights.  |
| <b>FR.5</b> | <b>Data Visualization</b> | To Communicate the insights from the analysis effectively, data visualization techniques can be used. This may include creating charts, Graphs and dashboard to visualize the data in a meaningful way.          |
| <b>FR.6</b> | <b>Reporting</b>          | Finally, A Report can be generated that summarizes the findings from the data analysis. This report may include Visualizations, insights and recommendations for companies or Job seekers based on the analysis. |

## 4.2 NON- FUNCTIONAL REQUIREMENTS

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

| <b>FR No.</b> | <b>Non-Functional Requirement</b> | <b>Description</b>  |
|---------------|-----------------------------------|---|
| <b>NFR.1</b>  | <b>Usability</b>                  | The System should be easy to use and intuitive for end-users, with a clear and user-friendly interface. Users should be able to access and analyze job posting data easily without any technical knowledge. |
| <b>NFR.2</b>  | <b>Security</b>                   | The System should be designed with robust security measures to protect the data being collected and analyzed. This may include access controls, data encryption and secure transmission protocols.          |
| <b>NFR.3</b>  | <b>Reliability</b>                | The System should be always reliable and available to end-users. The System should backup and recovery mechanisms to ensure that data is not lost in case of system failure.                                |
| <b>NFR.4</b>  | <b>Performance</b>                | The System should be able to provide quick and responsive analysis results for end-users. The System should be able to perform data analysis and generate reports in a timely manner.                       |

|              |                     |   |
|--------------|---------------------|---|
| <b>NFR.5</b> | <b>Availability</b> | It refers to the ability of the data analysis system to remain operational and accessible to end-users. The factors Includes like System Uptime, Performance, Redundancy, Disaster recovery, Monitoring and Alerting.                             |
| <b>NFR.6</b> | <b>Scalability</b>  | The Data Analysis process should be Scalable to handle a large volume of data as Glassdoor has millions of job postings. The System should be able to handle an increasing number of Job Postings and user traffic without affecting Performance. |

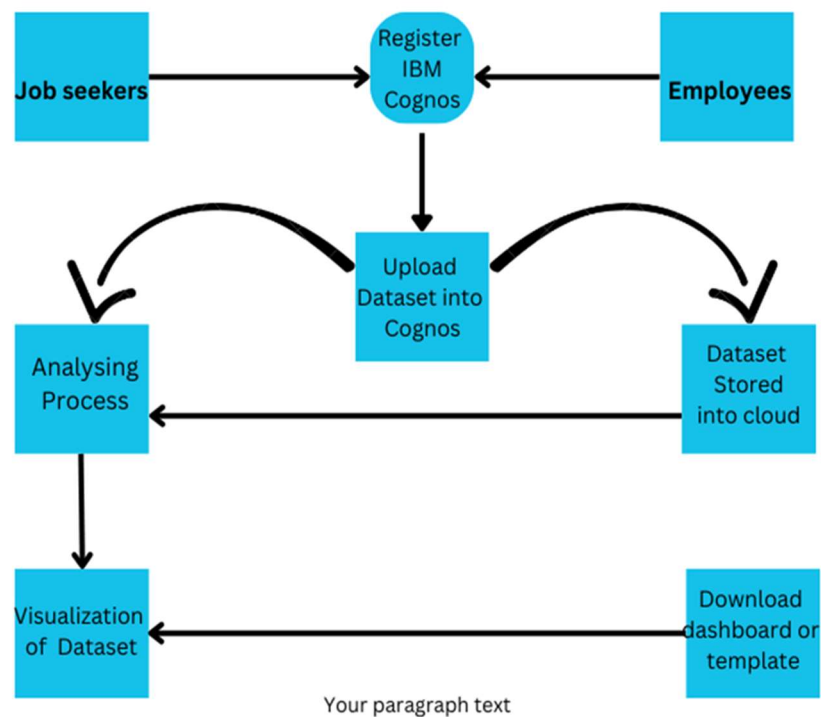


## CHAPTER 5

### PROJECT DESIGN

#### 5.1 DATA FLOW DIAGRAMS

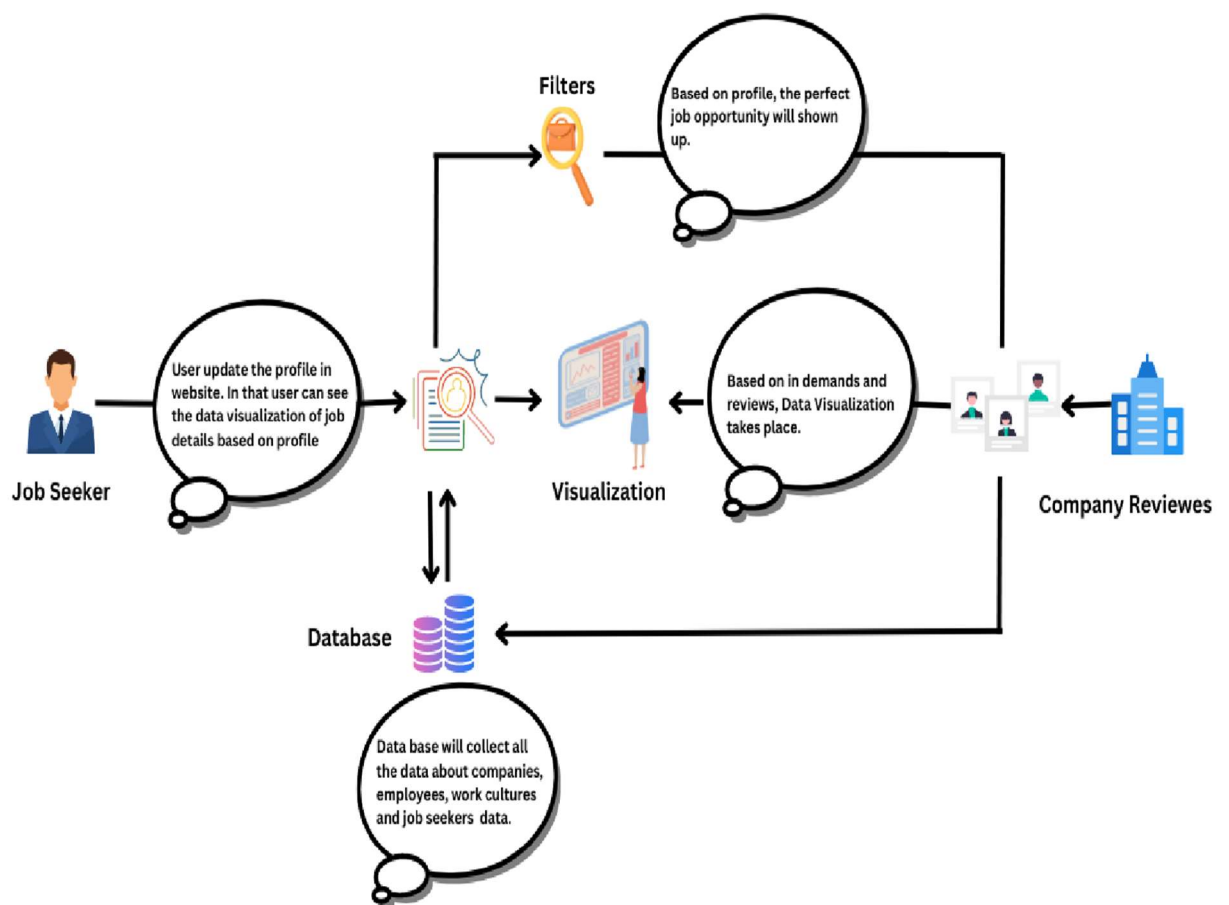
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



**Figure 5.1.1** Data Flow Diagram.



## 5.2 SOLUTION / TECHNICAL ARCHITECTURE



**Figure 5.2.1** Solution Architecture Diagram.

### 5.3 USER STORIES

| User story            | Functional requirements | Release  | User Number story | User Story  | Acceptance Criteria   | Priority |
|-----------------------|-------------------------|----------|-------------------|---|---|----------|
| <b>Hiring Manager</b> | Salary Comparison Tool  | Sprint 1 | USN-1             | As a hiring manager, I want to be able to compare the salaries of different job positions in my industry, so that I can make informed decisions about compensation packages for my employees. | The tool must provide accurate salary data for different job positions within the user's industry. The user must be able to compare salaries across different geographic locations and experience levels. | High     |

|                   |                       |          |       |   |   |      |
|-------------------|-----------------------|----------|-------|---|---|------|
| <b>Job Seeker</b> | Job Listing Filtering | Sprint 1 | USN-2 | As a job seeker, I want to be able to filter job listings by location and salary range, so that I can easily find jobs that match my preferences. | The tool must allow users to filter job listings by geographic location and salary range. The tool must provide accurate and up-to-date job listing data. | High |
| <b>Recruiter</b>  | Job Listing Search    | Sprint 2 | USN-3 | As a recruiter, I want to be able to search for job listings that match specific criteria, such as industry, job title, and location.             | The tool must allow users to search for job listings based on multiple criteria, including industry, job title, and location.                             | High |

|                       |                       |          |       |  |   |        |
|-----------------------|-----------------------|----------|-------|--|---|--------|
|                       |                       |          |       | and location, so that I can quickly identify potential candidates for open positions.  | The search function must provide accurate and relevant results.   |        |
| <b>Business Owner</b> | Market Trend Analysis | Sprint 3 | USN-4 | As a business owner, I want to be able to track the overall trends in the job market, such as the most in-demand skills and the average salaries | The tool must provide up-to-date and comprehensive data on job market trends, including in-demand skills and average salaries. The tool must allow users to visualize | Medium |

|                   |                      |          |       |  |  |        |
|-------------------|----------------------|----------|-------|--|--|--------|
|                   |                      |          |       | for different job positions, so that I can make strategic decisions about staffing and resource allocation.                | trends over time and across different industries.  |        |
| <b>Researcher</b> | Large Dataset Access | Sprint 4 | USN-5 | As a researcher, I want to be able to access large datasets of job listings and associated metadata, so that I can conduct | - The tool must provide access to large datasets of job listings and associated metadata. The data must be comprehensive and up-to-date. | Medium |

|                                |  |          |       |   |   |      |
|--------------------------------|--|----------|-------|---|---|------|
|                                |  |          |       | statistical analyses and identify patterns and trends in the job market.  |   |      |
| <b>Human Resources Manager</b> | Employee Satisfaction and Retention Analysis | Sprint 4 | USN-6 | As a human resources manager, I want to be able to identify the key factors that influence employee satisfaction and retention, so that I can develop strategies to | - The tool must provide data on employee satisfaction and retention rates. The data must include factors such as compensation, benefits, work environment, and job responsibility | High |

|                       |                                 |          |       |  |  |      |
|-----------------------|---------------------------------|----------|-------|--|--|------|
|                       |                                 |          |       | improve employee engagement and reduce turnover.   | ties.  |      |
| <b>Market Analyst</b> | Job Market Performance Analysis | Sprint 3 | USN-7 | As a job market analyst, I want to be able to track the performance of different industries and companies over time, so that I can provide insights and recommendations to clients and | The tool must provide up-to-date data on job market performance across different industries and companies. The tool must allow users to visualize trends over time and across different regions. | High |

|                         |                                |          |       |   |  |      |
|-------------------------|--------------------------------|----------|-------|---|--|------|
|                         |                                |          |       | stakeholders.   |  |      |
| <b>Business Analyst</b> | Salary and Benefits Comparison | Sprint 2 | USN-8 | As a business analyst, I want to be able to compare the salaries and benefits offered by different companies in my industry, so that I can make recommendations to my organization about how to remain competitive in the job | The tool must provide accurate and comprehensive data on salaries and benefits across different companies in the user's industry. The tool must allow users to compare data across multiple factors, such as location, company size, and job | High |



|                       |   |          |       |   |   |  |
|-----------------------|---|----------|-------|---|---|--|
|                       |   |          |       | market.   | position.   |  |
| <b>Data Scientist</b> | Large Dataset Access for Predictive Modelling | Sprint 5 | USN-9 | As a data scientist, I want to be able to access large datasets of job listings and associated metadata, so that I can build predictive models and identify factors that influence job outcomes such as salary and career | The tool must provide access to large datasets of job listings and associated metadata. The data must include factors such as job title, location, education level, and work experience |  |

|  |  |  |  |                  |  |  |
|--|--|--|--|------------------|--|--|
|  |  |  |  | progressio<br>n. |  |  |
|--|--|--|--|------------------|--|--|

CODING & SOLUTIONING

---

## **CHAPTER 6**

### **CODING & SOLUTIONING**

#### **6.1 FEATURE 1**

Glass doors in the future workplace offer a range of features that promote transparency, collaboration, and well-being. They create an open and visually connected environment, fostering a culture of trust and openness among employees. With an emphasis on natural light, these doors maximize daylight entry, positively impacting productivity, and employee well-being.

#### **6.2 FEATURE 2**

In addition to their visual appeal, glass doors in the future of work prioritize safety, durability, and sustainability. They are built with strong and impact-resistant materials like tempered or laminated glass, ensuring the security of the workplace. These doors also contribute to sustainability goals by incorporating energy-efficient glass and eco-friendly materials, reducing environmental impact.

RESULT

---

## **CHAPTER 7**

### **RESULTS**

#### **7.1 PERFORMANCE METRICS**

By analyzing the visualization, you can potentially uncover trends in job satisfaction, salary discrepancies, employee engagement, diversity and inclusion, and other aspects of the workplace. These insights can be valuable for businesses, job seekers, researchers, and policymakers to understand the current state of the job market, identify areas for improvement, and make informed decisions.

## ADVANTAGES AND DISADVANTAGES

---

## **CHAPTER 8**

### **ADVANTAGES AND DISADVANTAGES**

#### **8.1 ADVANTAGES**

- **Transparent insights:** Glassdoor provides employees with valuable information about companies, including salaries, workplace culture, and employee reviews, allowing job seekers to make more informed decisions about potential employers.
- **Enhanced job market efficiency:** Glassdoor's platform facilitates better matching between job seekers and employers, streamlining the job search process and increasing efficiency in the labor market.
- **Employer branding and recruitment:** Companies can leverage Glassdoor to showcase their positive aspects, highlight employee experiences, and enhance their employer brand, attracting top talent.
- **Improved employee satisfaction:** Glassdoor encourages companies to prioritize employee satisfaction by providing a platform for feedback and reviews. This can lead to improvements in workplace conditions, benefits, and overall job satisfaction.
- **Accessible and user-friendly platform:** Glassdoor's user-friendly interface and mobile app make it easily accessible, allowing job seekers and employees to access information on the go.



## 8.2 DISADVANTAGES

- **Subjectivity and bias:** Reviews on Glassdoor are subjective and can be influenced by individual experiences and personal biases, making it challenging to assess the overall reputation of a company accurately.
- **Limited data sample:** The reviews on Glassdoor may not represent the entire workforce of a company, as individuals with extreme experiences or opinions are more likely to leave reviews, leading to potential sample bias.
- **Lack of verification:** Glassdoor does not verify the identities of reviewers or the accuracy of their claims, which can allow for misinformation or false reviews to influence perceptions.
- **Potential misuse:** Glassdoor can be misused by disgruntled employees or competitors who may post inaccurate or malicious reviews, harming a company's reputation.
- **Overemphasis on negative experiences:** Glassdoor reviews often focus on negative aspects of a company, creating a potential imbalance in perception, as satisfied employees may be less likely to leave positive review

CONCLUSION



## **CHAPTER 9**

### **CONCLUSION**

In conclusion, Glassdoor plays a significant role in shaping the future of work by providing transparency, insights, and a platform for employee feedback and reviews. The advantages of Glassdoor include empowering job seekers with valuable information, enhancing job market efficiency, enabling employer branding and recruitment, fostering employee satisfaction, and offering a user-friendly platform. However, there are also disadvantages to consider, such as subjectivity and bias in reviews, limited data samples, lack of verification, potential misuse, and an overemphasis on negative experiences. As Glassdoor continues to evolve and address these challenges, it has the potential to further improve the way job seekers and employees navigate the modern workplace.

FUTURE SCOPE



## **CHAPTER 10**

### **FUTURE SCOPE**

In future we would like to add prediction process along with this project. Prediction code is developed using python and flask package. After developing the code, we can predicate the result accurately. Then we adding the pages to our website. When we connect the website, we are visualization the dataset not only for the companies it will fit for the all type of datasets. But the only in the form of csv file only it accepts. we can easy to visualization the dashboard, report, and story its help people to understand in better ways.



## **CHAPTER 11**

### **APPENDIX**

#### **A.1 SOURCE CODE**

##### **app.py**

```
from flask import Flask, render template, redirect, url_for
app = Flask(_name_)
@app. route ('/', methods=["GET", "POST"])
def index ():
    return render template('index.html')
@app. route ('/dashboard', methods=["GET", "POST"])
def dashboard ():
    return render template('dashboard.html')
@app. route ('/report', methods=["GET", "POST"])
def report ():
    return render_template('report.html')
@app. route ('/story', methods=["GET", "POST"])
def story ():
    return render_template('story.html')
# Run server
if _name_ == "_main_":
    app.run(debug=True)
```

### index.html

```
<li><a href="{url_for('dashboard')}">Dashboard</a></li>
<li><a href="{url_for('report')}">report</a></li>
<li><a href="{url_for('story')}">story</a></li>
```

### dashboard.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Glassdoor</title>
</head>
<body>
  <h1>DashBoard for Glassdoor Jobs</h1>
  <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&a
mp;pathRef=.my_folders%2Ffinancial%2Bdashboard%2B1&closeWindowOnLastView=true&ui_appbar=false&ui_navb
ar=false&shareMode=embedded&action=view&mode=dashboard&subView=model00000018825a67eb2_00000000"
width="1350" height="900" frameborder="0" gesture="media"
allow="encrypted-media" allowfullscreen=""></iframe>
</body>
</html>
```



### story.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Glassdoor</title>
</head>
<body>
  <h1>Story for Glassdoor Jobs</h1>
  <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&path
Ref=.my_folders%2Ffinancial%2Bdashboard%2B1&closeWindo
wOnLastView=true&ui_appbar=false&ui_navbar=false&am
p;shareMode=embedded&action=view&mode=dashboard&a
mp;subView=model0000018825a67eb2_000000000" width="1350"
height="900" frameborder="0" gesture="media" allow="encrypted-
media" allowfullscreen=""></iframe>

</body>
</html>
```

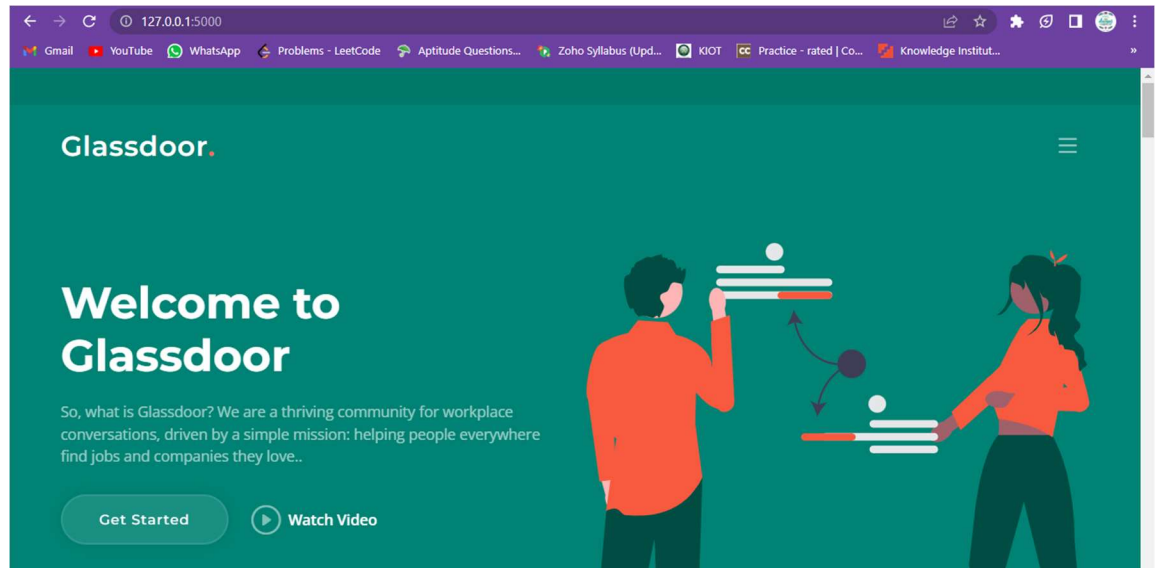
## report.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Glassdoor</title>
</head>
<body>
  <h1>Report for Glassdoor Jobs</h1>
  <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=report&path
Ref=.my_folders%2Ffinancial%2Bdashboard%2B1&closeWindow
OnLastView=true&ui_appbar=false&ui_navbar=false&s
hareMode=embedded&action=view&mode=dashboard&
subView=model0000018825a67eb2_00000000" width="1350"
height="900" frameborder="0" gesture="media" allow="encrypted-
media" allowfullscreen=""></iframe>

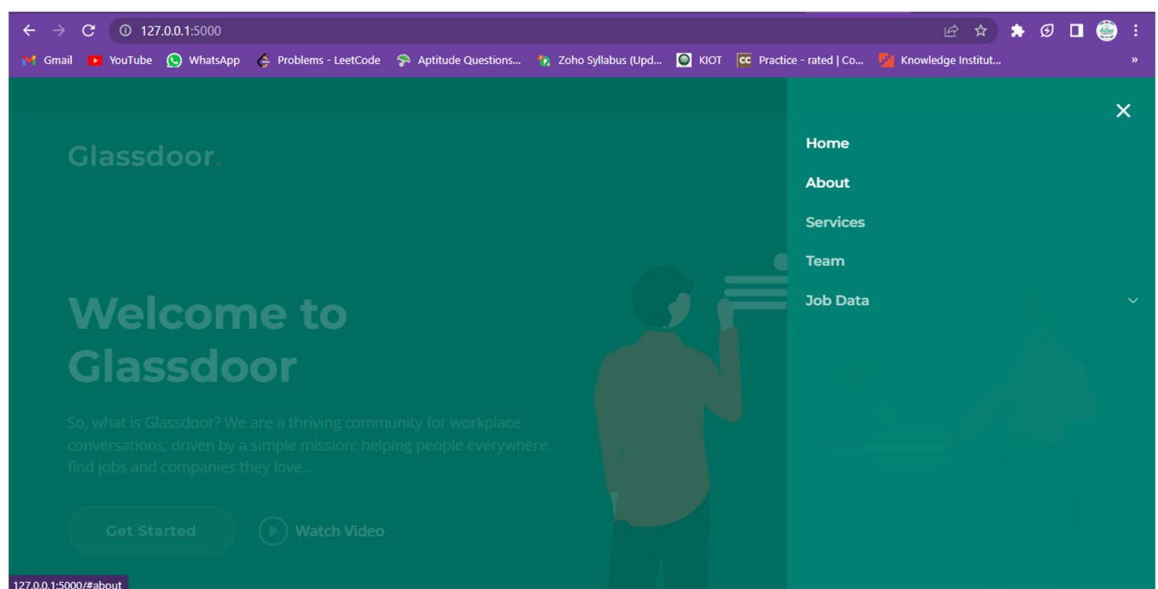
</body>
</html>
```

## A.2 SCREENSHOTS

### A.2.1 WEB PAGE SCREENSHOTS

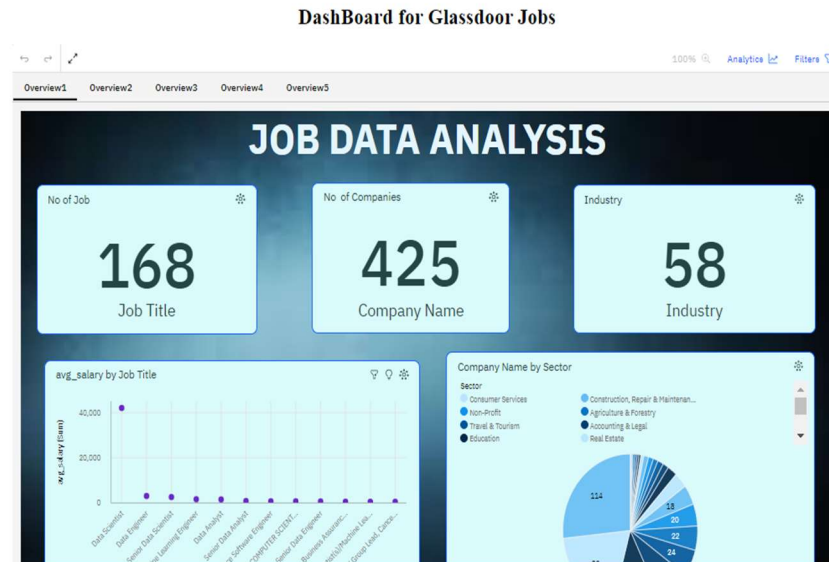


**Fig A.2.1.1 HOME PAGE FOR WEBSITE**

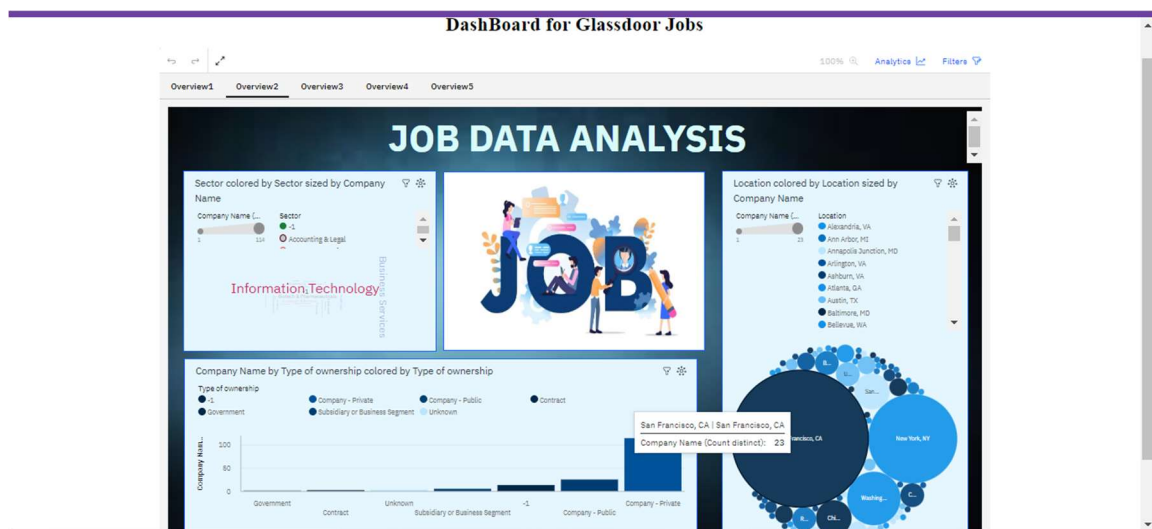


**Fig A.2.2.2 SUB VISUALIZATION PAGE**

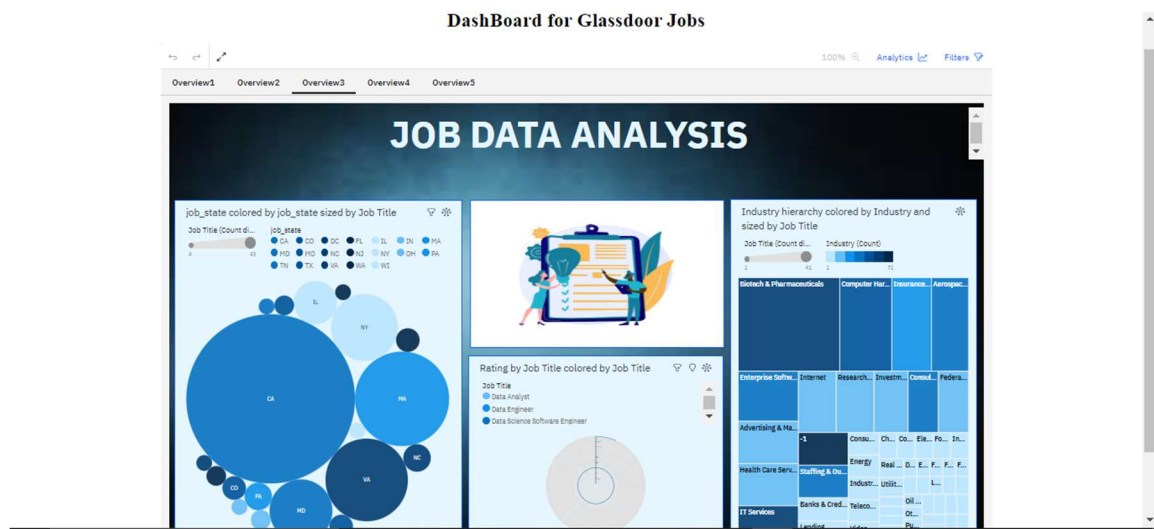
### A.2.2 DASHBOARD



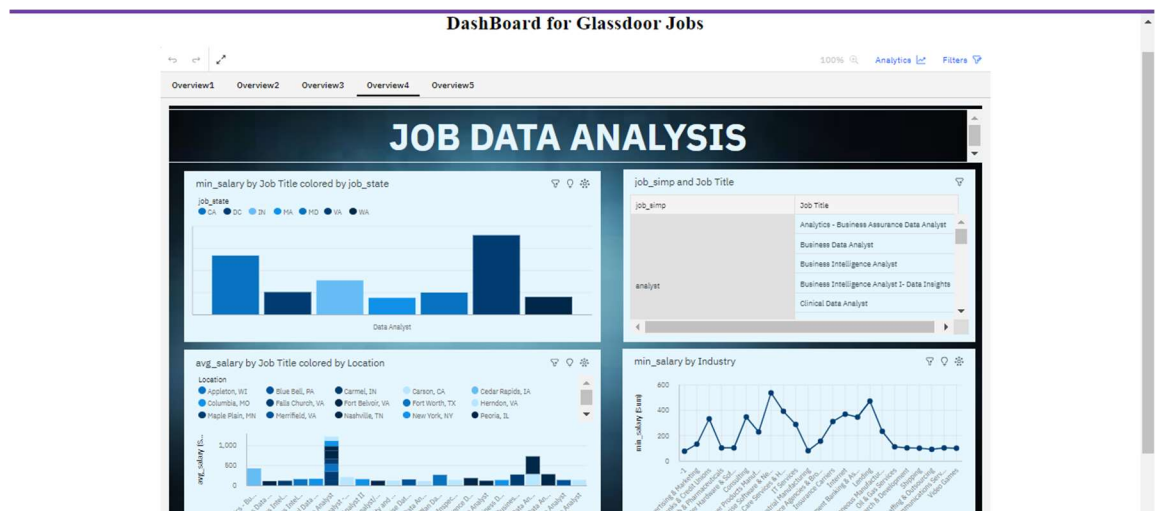
**Fig A.2.2.1 NO. JOBS AND THEIR TITLES**



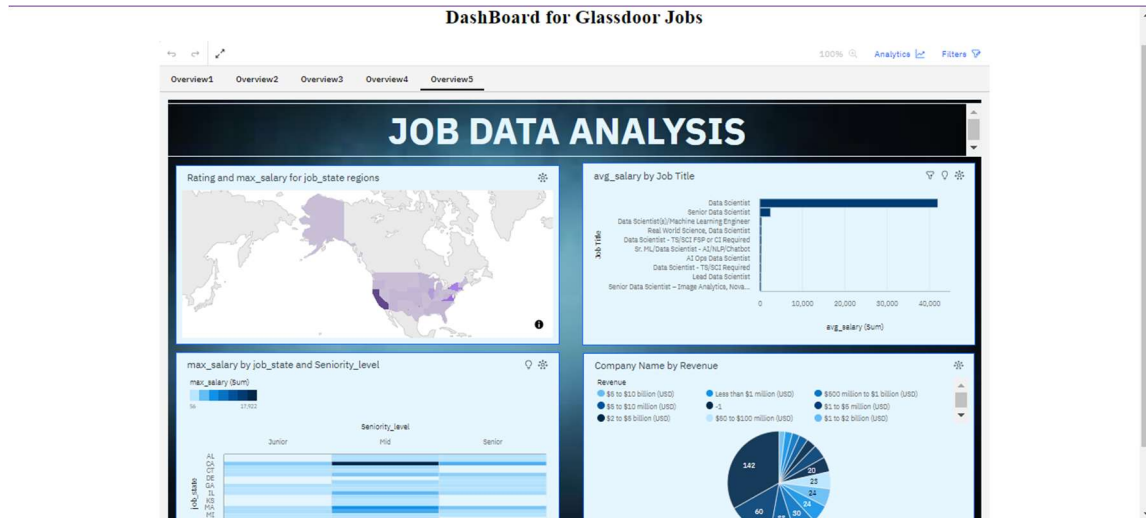
**Fig A.2.2.2 LOCATION AND OWNERSHIP FOR COMPANIES**



**Fig A.2.2.3 HIERARCHY OF COMPANIES**

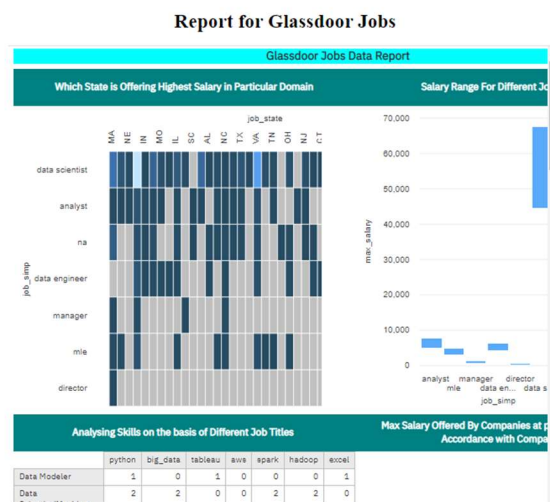


**Fig A.2.2.4 MINIMUM AND AVERAGE SALARY OF COMPANIES**



**Fig A.2.2.5 MAXIMUM AND AVERAGE SALARY OF COMPANIES**

## A.2.3 REPORT



**Fig A.2.3.1 HIGHEST SALARY FOR DIFFERENT JOB**

[illegible]

42



## A.2.4 STORY

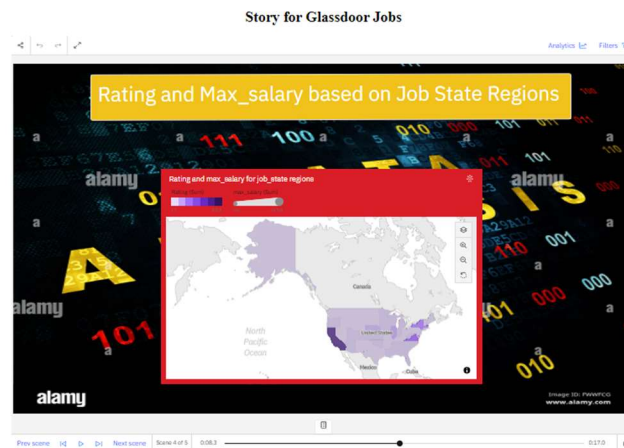


Fig A.2.4.1 GLASS DOOR JOB ANALYSIS



Fig A.2.4.2 MAXIMUM SALARY FOR JOBS IN DIFFERENT SITES





**Fig A.2.4.5** MAXIMUM SALARY FOR JOBS IN DIFFERENT SITES

## **GITHUB & PROJECT DEMO LINK**

**GITHUB LINK:**

**<https://github.com/varshini318/Naan-Mudhalvan-Data-Analysis-NM2023TMID01884>**

**PROJECT DEMO LINK:**

**<https://drive.google.com/file/d/1NcYs8hIS9rIVUWFzVtR0OTrGuo-SrWM7/view?usp=sharing>**

## REFERENCE

- [1] Fabian Frederik Frank, Tyler Emerson Whittle., “Predicting Company Rating through Glassdoor Reviews”, *Stanford University*,2022
- [2] Linnea Uyeno.,” An Empirical Analysis of Company Culture: Using Glassdoor Data to Measure the Impact of Culture and Employee Satisfaction on Performance”, *Claremont McKenna College*,2020
- [3] Ning Luo, Yilu Zhou, John J. Shon.,” Employee Satisfaction and Corporate Performance: Mining Employee Reviews on Glassdoor.com”, Fordham University, *New York*, USA,2016.
- [4] Louis, M. R. (1985). "An Investigator's Guide to Workplace Culture" in P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg and J. Martin. *Organizational Culture*. Beverly Hills, Sage: 73-93.
- [5] Glassdoor. (n.d.). Glassdoor Job Search: Find the job that fits your life. Retrieved from <https://www.glassdoor.com/index.htm>.