THE FUTURE OF WORK: DATA ANALYSIS OF GLASSDOOR JOBS

NAAN MUDHALVAN

PROJECT REPORT

Submitted By

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MYTHRAYAN O N	**(611220104092)**
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PAVITHRA S	**(611220104103)**

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

KNOWLEDGE INSTITUTE OF TECHNOLOGY,

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BONAFIDE CERTIFICATE

Certified that this project report titled **"THE FUTURE OF WORK: DATA ANALYSIS OF GLASSDOOR"** is the bonafide work of **"KISHORE K (611220104075), KRISHNA PRASAD S (611220104078), MYTHRAYAN O N (611220104092), NIVAASHINI S (611220104099), PAVITHRA S (611220104103)"** who carried out the project work under my supervision.

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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.

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ABSTRACT

ABSTRACT

This study explores how culture and employee satisfaction intersect and collectively impact a company's performance. Employing advanced machine learning techniques, it analyzes a vast dataset of 1.2 million Glassdoor reviews to pinpoint nine key cultural dimensions that significantly influence overall company performance. Notably, the study reveals that the influence of culture on performance varies across industries, prompting organizations to prioritize industry-specific cultural dimensions for improved outcomes. Furthermore, the research emphasizes the strong link between employee satisfaction and company performance, highlighting the critical importance of cultivating a positive and supportive work environment.

The findings emphasize the significance of cultural elements like innovation, respect, customer focus, and performance rewards. These factors enhance employee satisfaction and positively impact company performance. Further research with diverse datasets, accounting for industry specifics, is recommended. In summary, this research highlights the crucial roles of culture and employee satisfaction in driving company performance, with substantial implications for organizations in a competitive landscape.

LIST OF FIGURES

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 explores the impact of culture and employee satisfaction on company performance, drawing from an extensive analysis of 1.2 million Glassdoor reviews utilizing machine learning techniques. It unveiled nine crucial cultural dimensions, including customer focus, innovation, performance rewards, and integrity, all of which demonstrably contribute to enhanced company performance.

However, it's essential to recognize that the influence of culture on performance varies across industries, prompting organizations to give precedence to industry-specific cultural dimensions in their pursuit of improved performance. Moreover, the findings firmly establish the robust correlation between employee satisfaction and company performance, underscoring the vital importance of fostering a work environment that prioritizes well-being.

For organizations aiming to boost both employee satisfaction and company performance, it is advisable to emphasize cultural aspects such as innovation, respect, customer focus, and performance rewards. While these insights are invaluable, it recommends further research on more extensive and diversified datasets, carefully accounting for industry-specific effects. Ultimately, this study sheds light on the pivotal roles of culture and employee satisfaction in driving company performance, bearing significant implications for organizations navigating today's competitive landscape.

1.2 Purpose

Glassdoor serves as a valuable resource not only for job seekers but also for employers seeking to understand the needs and expectations of their employees and potential candidates. This holds particular significance in today's highly competitive job market, where the battle for talent intensifies. The platform offers insights that can be instrumental in shaping the future of work.

With its comprehensive database of job listings, company reviews, salary information, and interview questions, Glassdoor empowers job seekers to make informed decisions regarding potential employers. Simultaneously, it equips employers with the tools and knowledge to enhance their reputation and attract top talent. The platform essentially acts as a bridge, connecting individuals with the information they need to make well-informed career and business decisions.

Contemplating the evolving landscape of work, Glassdoor's position remains pivotal. The increasing trend towards remote work and the growing demand for transparency and fairness in the workplace make Glassdoor an invaluable resource. It provides a wealth of data and insights to aid job seekers in navigating these shifts and adapting to the changing dynamics of the workforce. In this way, Glassdoor plays a key role in shaping the approach to work, both for job seekers and employers alike.

LITERATURE SURVEY

CHAPTER 2

LITERATURE SURVEY

2.1 Employee Contentment and Business Performance Author 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

Author: 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.

IDEATION & PROPOSED SOLUTION

CHAPTER 3

IDEATION & PROPOSED SOLUTION

3.1 Problem Statement Definition

A project focused on data analysis for Glassdoor job listings typically entails the aggregation and examination of job-related data sourced from the Glassdoor platform. This encompasses data points like job titles, salary details, company ratings, and job descriptions. The core objective of this undertaking is to unveil valuable insights and patterns within the job market, encompassing aspects such as frequently occurring job titles, average remuneration figures, and sought-after skill sets. Furthermore, the amassed data can serve as a foundation for making forecasts regarding future job market dynamics or for pinpointing organizations that provide the most competitive compensation packages.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS -1	User	Seek a Job	Temporal latency	Web Page unrespons -iveness	Anxiety
PS -2	User (Agent)	Address the issue	Unresponsive	Currently unavailable	Agitated
PS -3	User (Admin)	Generate a data redundancy	Data Loss	Technical breakdown	Tedious
PS -4	User	Seeking a condition	Status not accessible	Agent Not Updated	Stressed

3.2 EMPATHY MAP CANVAS

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviors and attitudes. It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges

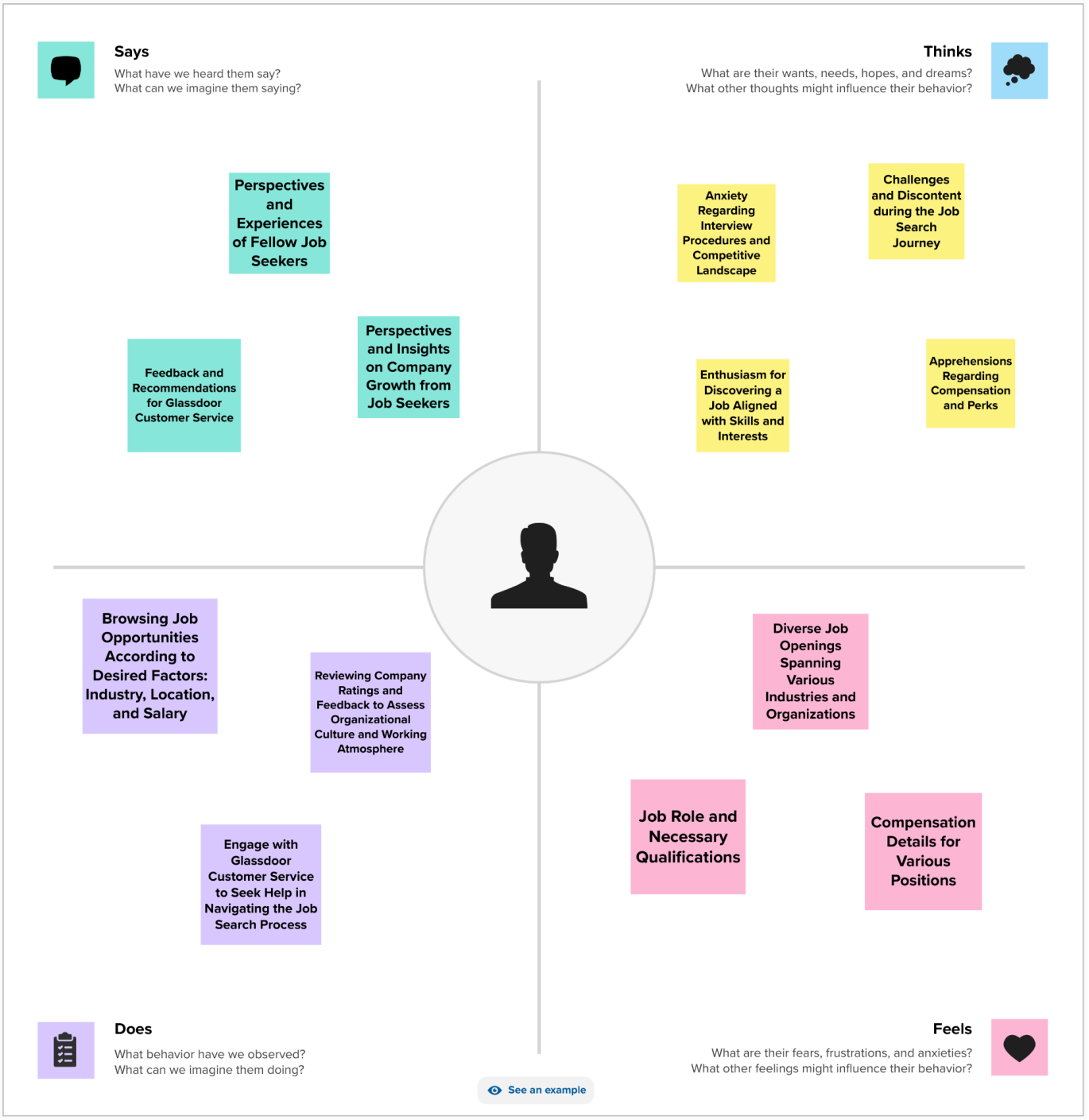

Figure 3.2.1 Empathy map.

3.3 IDEATION AND BRAINSTORMING

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.

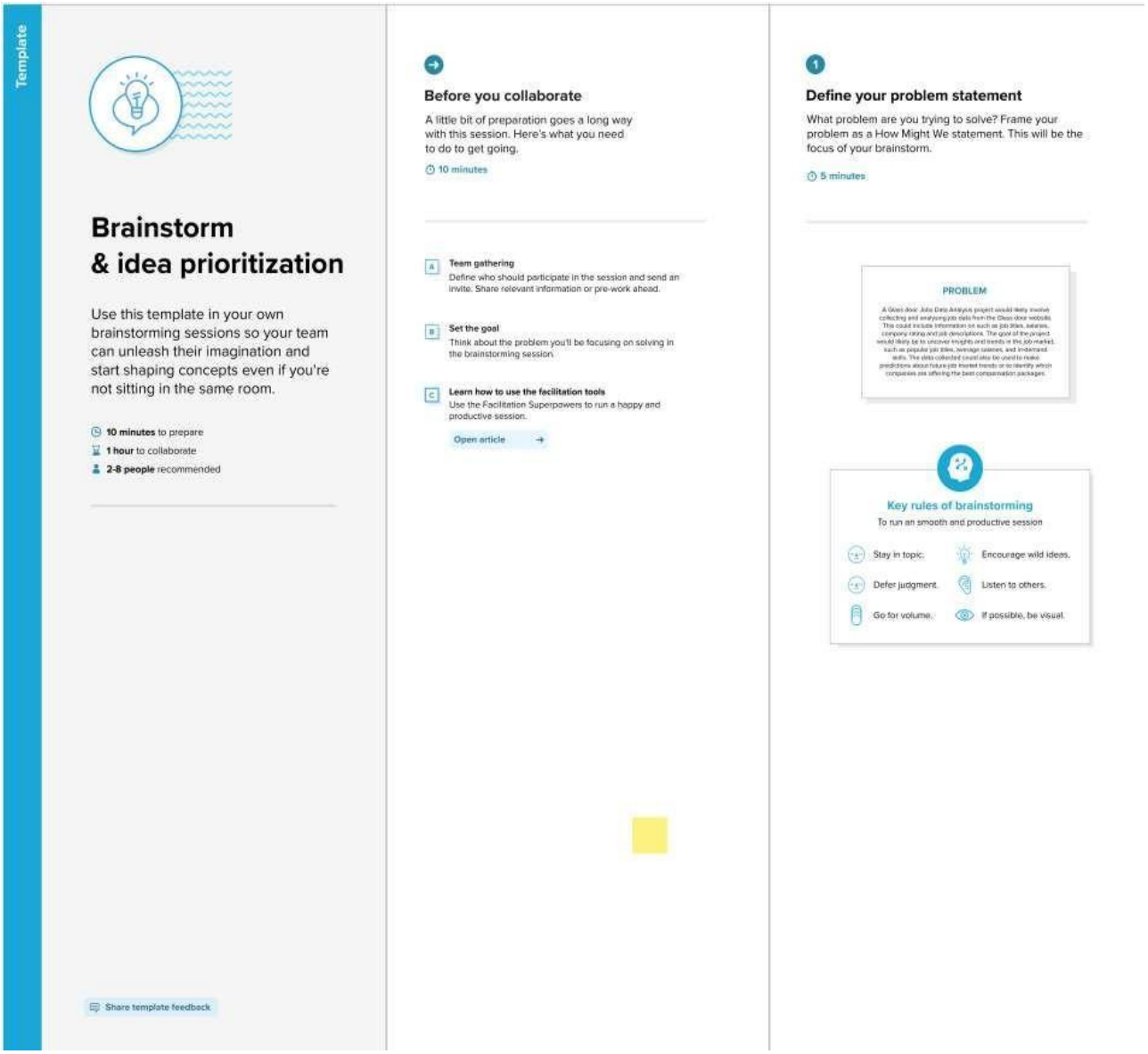

Figure 3.3.1 Brainstorming.

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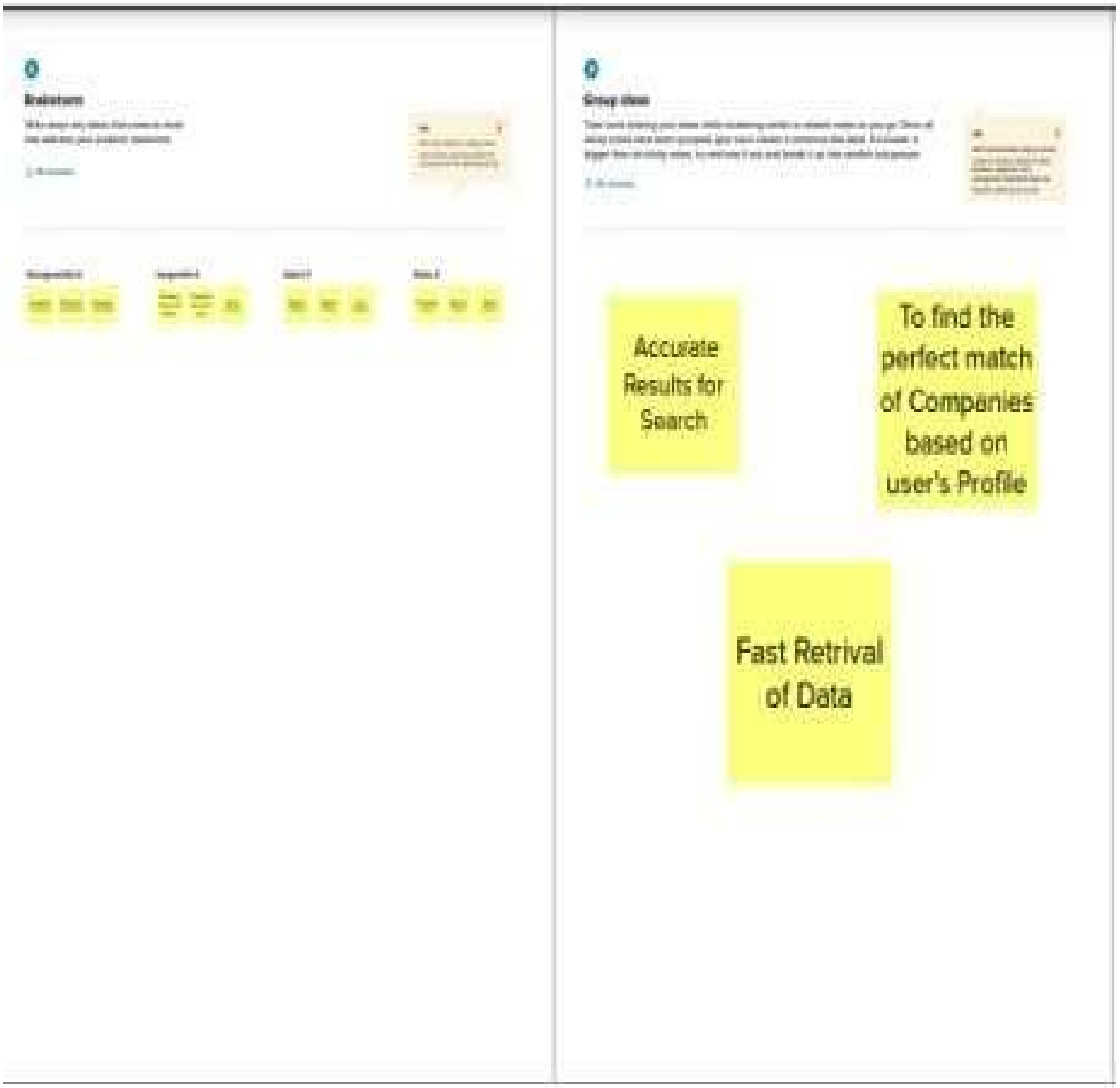


Figure 3.3.1 Brainstorming.

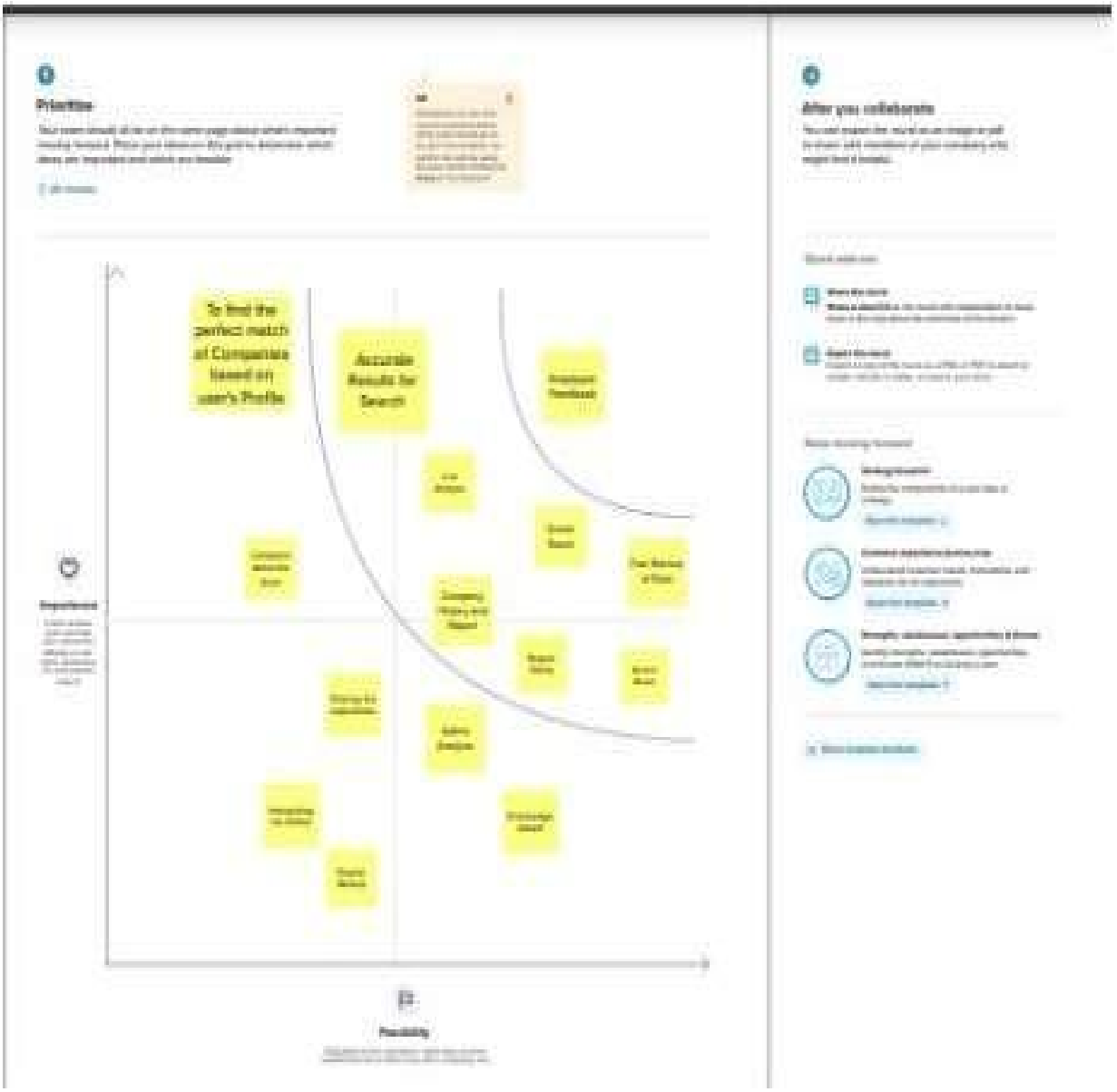


Figure 3.3.1 Brainstorming.

3.4 PROPOSED SOLUTION

S.No.	Parameter	Description
01.	**Problem Statement (Problem to be solved)**	A Glassdoor Jobs Data Analysis project entails gathering and studying job-related data from Glassdoor's website. This data may encompass details like job titles, salaries, company ratings, and job descriptions. The primary objective of this project is to discover patterns and insights in the job market, such as popular job titles, average salaries, and sought-after skills. The collected data can also be utilized for forecasting future job market trends and determining companies with competitive compensation packages.
02.	**Idea / Solution description**	● Combat Fake Reviews. ● Enhance Company Information. ● Offer Additional Career Resources: Advice, Interview Tips, Expert Engagement, Resume Templates.
03.	**Novelty / Uniqueness**	Glassdoor offers Data-Driven Business Insights from Employee Feedback.
04.	**Social Impact / Customer Satisfaction**	● User Satisfaction. ● Skill-Based Job and Internship Tracking. ● Access to Extra Income and Freelancing Gigs.
05.	**Business Model (Revenue**	● **Employer Branding Services:** Glassdoor assists companies in highlighting their brand and luring top talent.

	Model)	• **Job Advertising:** Glassdoor provides job posting services to help companies reach a specific audience of job seekers. • **Revenue Generation via Partnerships and Advertising:** Glassdoor earns income through partnerships and advertising.
06.	**Scalability of the Solution**	The ultimate aim of scaling user services is to create an environment that maximizes the efficiency of your user service specialists. It should enable them to minimize time spent on routine tasks and allocate more time to addressing essential user service matters.

REQUIREMENT ANALYSIS

CHAPTER 4

REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS

Following are the functional requirements of the proposed solution.

FR.NO	Functional Requirement (Epic)	Sub Requirement (Story Sub-Task)
FR.1	**Data Collection**	The data analysis procedure for Glassdoor job data involves gathering information from the website's job postings, which comprises details like job title, description, company name, location, and reviews.
FR.2	**Data Cleaning**	After data collection, it's essential to perform data cleaning to eliminate errors and discrepancies. This process includes deduplication, rectifying spelling errors, and standardizing data formats.
FR.3	**Data Preparation**	Post-cleaning, the data must undergo preparation for analysis, which includes converting data into a format suitable for analysis, including the conversion of categorical information into numerical data.

FR.4	**Data Analysis**	Post-cleaning, the data must undergo preparation for analysis, which includes converting data into a format suitable for analysis, including the conversion of categorical information into numerical data.
FR-5	**Data Visualization**	For effective communication of analysis insights, data can be visualized using techniques like chart and graph creation, along with the development of dashboards to convey data meaningfully.
FR-6	**Reporting**	In conclusion, a summary report is produced to encapsulate the outcomes of the data analysis. This report encompasses visual representations, key insights, and offers recommendations for both companies and job seekers derived from the analysis.

4.2 NON- FUNCTIONAL REQUIREMENTS

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

FR No.	Non-Functional Requirement	Description
NFR.1	Usability	The system should be user-friendly and straightforward for end-users, featuring an intuitive interface. Users should be able to effortlessly access and analyze job posting data without requiring technical expertise or skills.
NFR.2	Security	The system should incorporate strong security measures to safeguard the data collected and analyzed. This can encompass implementing access controls, data encryption, and secure transmission protocols.
NFR.3	Reliability	The system should offer uninterrupted availability to end-users, backed by reliable backup and recovery mechanisms to prevent data loss in the event of system failures.
NFR.4	Performance	The system should deliver prompt and responsive analysis results to end-users, with the capability to swiftly conduct data analysis and produce reports within a reasonable timeframe.

NFR.5	**Availability**	This pertains to the data analysis system's capacity to stay operational and available for end-users. Key considerations encompass system uptime, performance, redundancy, disaster recovery, as well as monitoring and alerting capabilities.
NFR.6	**Scalability**	The data analysis process must exhibit scalability to manage a substantial volume of data, given Glassdoor's extensive job postings database. The system should adeptly accommodate a growing number of job postings and user traffic without compromising its performance.

PROJECT DESIGN

CHAPTER 5

PROJECT DESIGN

5.1 DATA FLOW DIAGRAMS

A Data Flow Diagram (DFD) serves as a conventional visual tool for illustrating the flow of information within a system. A well-structured and concise DFD provides a graphical representation of the system's requirements. It highlights the pathways through which data enters and exits the system, identifies points of data transformation, and indicates locations where data is stored.

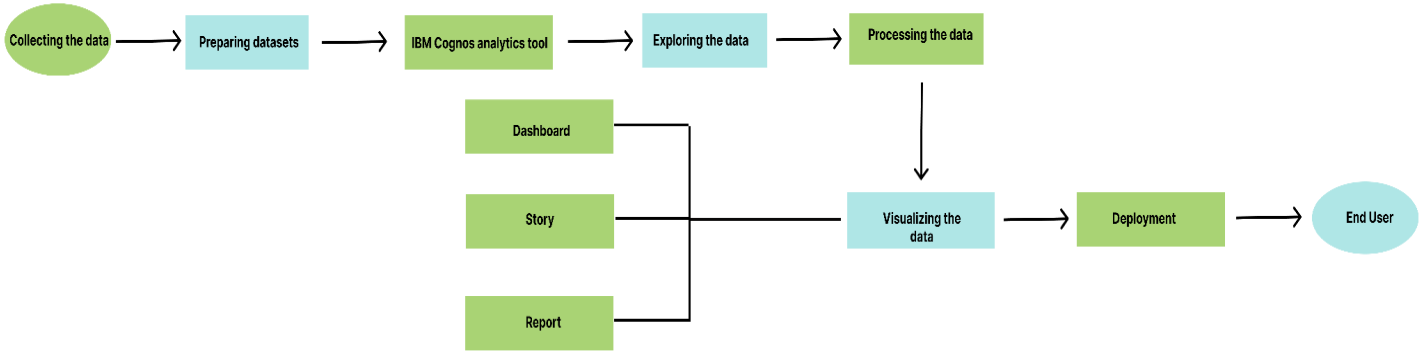


Figure 5.1.1 Data Flow Diagram.

5.2 SOLUTION & TECHNOLOGY ARCHITECTURE

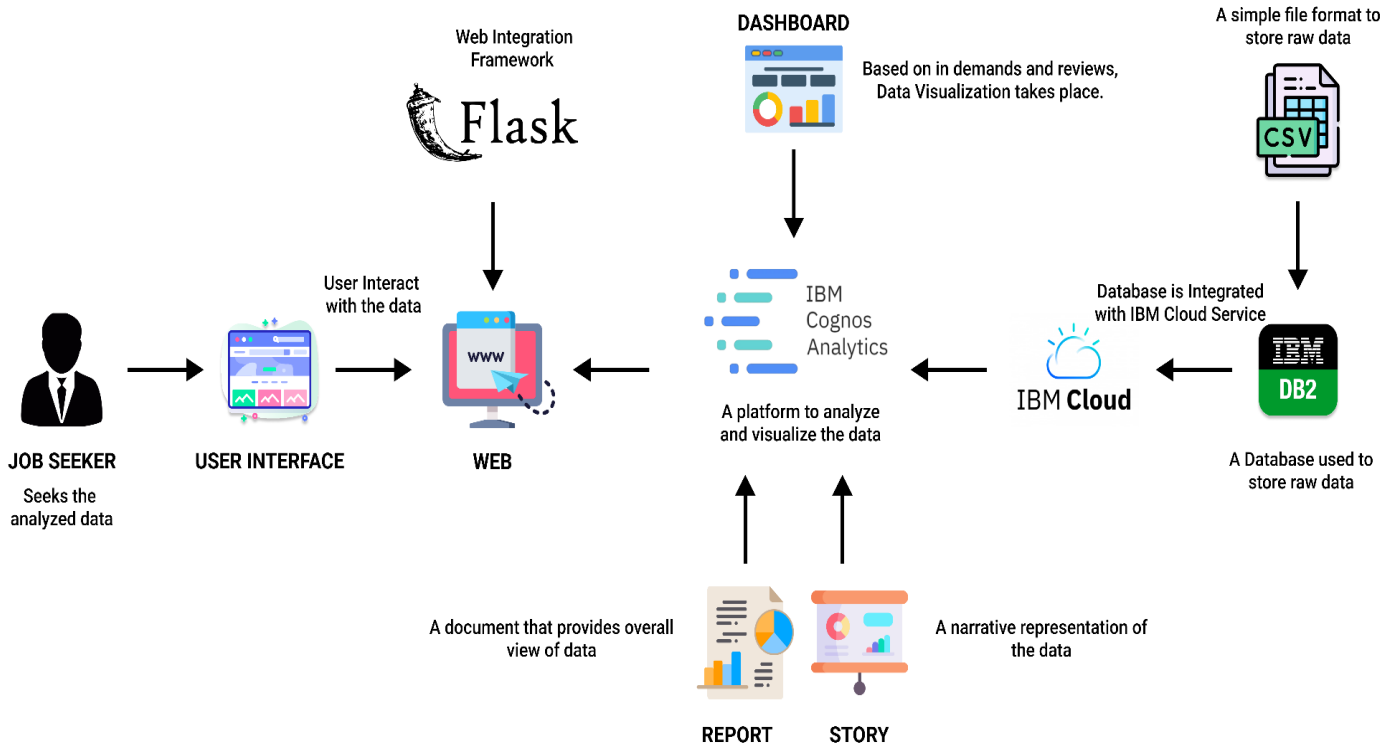


Figure 5.2.1 Solution Architecture Diagram.

5.3 USER STORIES

User story	Functional requirements	User Number Story	User Story	Acceptance Criteria	Priority	Release
Hiring Manager	Salary Comparison Tool	USN-1	As a hiring manager, I aim to compare the salaries for various job positions within my industry. This will enable me to make well informed decisions regarding compensation packages for my employees.	The tool should offer precise salary information for diverse job roles within the user's industry. Users should also have the capability to conduct salary comparisons across various geographical locations and experience levels.	High	Sprint 1
Job Seeker	Job Listing Filtering	USN-2	As a job seeker, I aim to filter job listings based on location and salary range to simplify the process of finding job opportunities that align with my preferences.	The tool should enable users to refine job listings by specifying geographic location and preferred salary range. Additionally, it is essential that the tool delivers precise and current job listing information.	High	Sprint 1

Recruiter	Job Listing Search	USN-3	As a recruiter, I desire the ability to search for job listings that meet specific criteria, such as industry, job title, and location, in order to swiftly pinpoint potential candidates for open positions.	The tool should grant users the option to seek out job listings using various criteria, encompassing industry, job title, and location. Additionally, the search feature must yield precise and pertinent results.	High	Sprint 2
Business Owner	Market Trend Analysis	USN - 4	As a business owner, I aim to monitor comprehensive job market trends, including the most sought -after skills and the average salaries for various job positions. This will enable me to make informed and strategic decisions.	The tool should furnish users with current and all - encompassing information regarding job market trends, encompassing highly sought -after skills and average salaries. Furthermore, users should have the capability to visualize these trends over time and across diverse industries.	Medium	Sprint 2

Market Analyst	Job Market Analysis	USN - 5	As a job market analyst, I aim to have the capacity to monitor and analyze the performance of various industries and companies over an extended period. This will enable me to offer valuable insights and recommendations to clients and stakeholders.	The tool should offer current data on the performance of the job market within distinct industries and companies. Additionally, it should empower users to visualize performance trends over time and across various regions.	High	Sprint 1

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.

CHAPTER 7

RESULTS

7.1 PERFORMANCE METRICS

Through a careful analysis of visualized data, you have the opportunity to unearth significant trends in various facets of the workplace. This analysis can shed light on critical factors such as job satisfaction, disparities in salaries, levels of employee engagement, and the state of diversity and inclusion. These insights hold substantial value for a wide spectrum of stakeholders, including businesses, job seekers, researchers, and policymakers. They offer a clear understanding of the prevailing conditions in the job market, pinpoint areas that require enhancement, and empower stakeholders to make well-informed decisions.

ADVANTAGES AND DISADVANTAGES

CHAPTER 8

ADVANTAGES AND DISADVANTAGES

8.1 ADVANTAGES

- **Invaluable Employee Insights:** Glassdoor offers a wealth of information to employees, ranging from salary details to workplace culture and candid employee reviews. This transparency equips job seekers with critical insights for making informed decisions about potential employers.
- **Streamlined Job Market Matching:** Glassdoor's platform contributes to more efficient job market matching. It facilitates the seamless connection between job seekers and employers, streamlining the job search process and increasing overall labor market efficiency.
- **Empowering Employer Branding:** Companies can harness Glassdoor as a powerful tool to showcase their positive attributes, spotlight employee experiences, and boost their employer brand. This, in turn, helps them attract and engage top talent.
- **Fostering Employee Satisfaction:** Glassdoor acts as a catalyst for companies to prioritize and improve employee satisfaction. By providing a platform for feedback and reviews, it encourages organizations to enhance workplace conditions, benefits, and overall job satisfaction.
- **Accessible, User-Friendly Interface:** Glassdoor's intuitive user interface and mobile app ensure accessibility for job seekers and employees on the go. It enables easy access to information, making the platform convenient and user-friendly.

8.2 DISADVANTAGES

- **Subjectivity and Individual Perspectives:** Glassdoor reviews are inherently subjective, reflecting the individual experiences and personal biases of the reviewers. This subjectivity can make it challenging to obtain an objective assessment of a company's reputation.
- **Limited Representation:** The reviews on Glassdoor may not provide a holistic representation of a company's workforce. Often, those with particularly positive or negative experiences are more inclined to leave reviews, leading to a potential bias in the sample.
- **Absence of Verification Mechanisms:** Glassdoor lacks verification processes for the identities of reviewers and the accuracy of their claims. This absence of verification can allow misinformation and false reviews to influence perceptions.
- **Potential for Misuse:** Glassdoor is susceptible to misuse, as disgruntled employees or competitors can post inaccurate or malicious reviews with the aim of damaging a company's reputation.
- **Emphasis on Negative Feedback:** Glassdoor reviews tend to place a stronger focus on the negative aspects of a company. This emphasis can create an imbalance in perceptions, as contented employees are less likely to leave positive reviews.

CONCLUSION

CHAPTER 9

CONCLUSION

In summary, Glassdoor plays a pivotal role in shaping the future of work. It achieves this by acting as a crucial conduit for transparency, insights, and a platform for invaluable employee feedback and reviews. Glassdoor offers several notable advantages. It empowers job seekers with the information they need to make informed decisions, thereby enhancing the efficiency of the job market. Additionally, it serves as a powerful tool for employer branding and recruitment, while simultaneously fostering employee satisfaction. Its user-friendly platform further contributes to its appeal. However, it's important to acknowledge the associated disadvantages. These include the presence of subjectivity and bias in reviews, the limitation of data samples, the absence of verification mechanisms, and the potential for misuse of the platform. There is also a concern that Glassdoor might overemphasize negative experiences. As Glassdoor continues to evolve and tackle these challenges, it has the potential to significantly improve the way job seekers and employees navigate the complexities of the modern workplace.

FUTURE SCOPE

CHAPTER 10

FUTURE SCOPE

In the future, we plan to integrate a prediction process into our project. The prediction code has been developed using Python and Flask packages. Once the code is ready, we can accurately forecast results. We have added dedicated pages to our website to facilitate this process. When our website is connected, we offer data visualization capabilities not only for specific companies but for various types of datasets. These datasets are typically provided in CSV file format, making it easy to create interactive dashboards, reports, and stories. This visualization helps users better comprehend the data.

APPENDIX

CHAPTER 11

APPENDIX

A.1 SOURCE CODE

app.py

```
from flask import Flask, render_template

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')


if __name__ == "__main__":
    app.run(debug=True)
```

index.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>Data Analysis of Glassdoor Jobs</title>
   <link rel="stylesheet" href="{{ url_for('static', filename='css/app.css') }}">
   <link rel="stylesheet" href="/static/css/app.css">



</head>
<body>
   <video autoplay loop muted class="back-video" >
      <source src="{{ url_for('static', filename='media/bg_video.mp4') }}"
type="video/mp4">
   </video>


   <div class="header">
      <h2 class="logo">The Future of Work:<br>Data Analysis of
<span>Glassdoor</span> Jobs</h2>


      <nav>
         <ul class="nav-links">
            <li><a href="{{ url_for('index') }}">HOME</a></li>
            <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>
```

```
        </ul>
    </nav>
</div>
<div class="Section">

    <section >
        <p>
```

Welcome to our Data Analysis of Glassdoor Jobs web application! Discover the thriving demand for data analysts across diverse sectors. Unlock a world of opportunities, from entry-level to senior roles, in technology, healthcare, finance, and more. Enjoy competitive salaries and endless potential for career growth. As technology evolves, so does the field, promising an exciting journey.

To provide a more comprehensive picture, we can refer to specific data and statistics related to the job market, which can be sourced from Glassdoor's extensive database. For more information and to explore current data analysis job opportunities, visit Glassdoor's job listings and reports. Shape your future in the data-driven world with us. Explore current job listings and reports on Glassdoor for in-depth insights. Your data analysis career begins here!

```
        </p>

    </section>

</div>
```

```
    </body>
    </html>
```

app.css

```
@import
url('https://fonts.googleapis.com/css2?family=Roboto&display=swap');
@import
url('https://fonts.googleapis.com/css2?family=Cherry+Cream+Soda&display
=swap');

*{
   box-sizing: border-box;
   margin: 0;
   padding: 0;
}

body{
   margin: 10px 50px;
   color: #1B4332;
}

li, a{
   cursor: pointer;
   font-family: Roboto, sans-serif;
   font-weight: 500;
   font-size: 16px;
   color: #1B4332;
   text-decoration: none;

}

.header{
   font-family: Roboto, sans-serif;
   display: flex;
   justify-content: space-between;
   align-items: center;
   align-content: center;
```

```
    padding: 30px 10px;
    box-shadow: rgba(0, 0, 0, 0.24) 0px 3px 8px;
    background-color: #bcbbbb1e;
}

p{
    font-family: Roboto, sans-serif;
}

body{
    margin: 10px 50px;
    color: #1B4332;
}
.logo{
    font-family: 'Cherry Cream Soda';
    cursor: pointer;
    overflow: hidden;
    white-space: nowrap;
    animation: typing 5s steps(40) ;
}

.logo span{
    color: #0CAA41;
}


@keyframes typing {
    from { width: 0; }
    to { width: 64%; }
}

.back-video{
    width: 100vw;
    height: 100vh;
    object-fit: cover;
    position: fixed;
    left: 0;
    right: 0;
```

```
    top: 0;
    bottom: 0;
    z-index: -1;
    filter: blur(3px);


}



.nav-links{
    list-style: none;
}

.nav-links li{
    display: inline-block;
    padding: 0px 20px 0px 0px;
}

.nav-links li a{
    transition: all 0.3s ease 0s;
    font-weight: 550;
}

.nav-links li a:hover{
    color: #0CAA41;

}
.Section {
    padding: 30px 30px;
    margin-top: 5%;
    width: 100%;
    border-radius: 10px;
    background-color: #bcbbbb1e;
    color: #021009;
    box-shadow: rgba(14, 30, 37, 0.12) 0px 2px 4px 0px, rgba(14, 30, 37,
0.32) 0px 2px 16px 0px;
}
```

```
.nav-links li a {
   position: relative;
}

.nav-links li a:after {
   content: '';
   position: absolute;
   left: 0;
   bottom: -2px;
   width: 0;
   height: 2px;
   background-color: #1B4332;
   transition: width 0.3s ease-in-out;
}

.nav-links li a:hover:after {
   width: 100%;
}

.Section p{
   line-height: 1.5pc;
   text-align:justify;
   font-size: larger;
}

.a {
   text-indent: 75px;
}
.b {
   text-indent: 150px;
}
```

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>Dashboard Page</title>
    <link rel="stylesheet"  href="{{ url_for('static', filename='css/dashboard.css') }}">
</head>
<body>
    <h1>DASHBOARD</h1>
    <div class="iframe1">
        <iframe src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&amp;pathRef=.my_folders%2Fglassdoor_dashboard&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&amp;action=view&amp;mode=dashboard&amp;subView=model0000018b4bb59c5c_00000002" width="1350" height="900" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>    </div>


</body>
</html>
```

dashboard.css

```
@import url('https://fonts.googleapis.com/css2?family=Cherry+Cream+Soda&display=swap');
body{
    background-color: #f0fbf2;
}
```

```
h1{
    font-family: 'Cherry Cream Soda';
    color: #1B4332;
    text-align: center;
    font-size: 50px;

}

.iframe1{
    border: 2px solid gray;
    padding: 20px 30px;
    display: flex;
    align-items: center;
    justify-content: center;
```

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>Story Page</title>
   <link rel="stylesheet"  href="{{ url_for('static', filename='css/story.css') }}">
</head>
<body>
   <h1>STORY</h1>
   <div class="iframe3">
      <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&amp;pathRef=.my_folders%2Fglassdoor_story&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&amp;action=view&amp;sceneId=model0000018b4be6fd8c_00000001&amp;sceneTime=0" width="1350" height="900" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>    </div>


</body>
</html>
```

story.css

```
@import
url('https://fonts.googleapis.com/css2?family=Cherry+Cream+Soda&display=swap');


body{
```

```
        background-color: #f0fbf2;
    }
    h1{
        font-family: 'Cherry Cream Soda';
        color: #1B4332;
        text-align: center;
        font-size: 50px;

    }

    .iframe3{
        border: 2px solid gray;
        padding: 20px 30px;
        display: flex;
        align-items: center;
        justify-content: center;
    }
```

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>Report Page</title>
    <link rel="stylesheet"  href="{{ url_for('static', filename='css/report.css') }}">
</head>
<body>
    <h1>REPORT</h1>
    <div class="iframe2">
        <iframe
src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2Fglassdoor_report&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&amp;action=run&amp;format=HTML&amp;prompt=false" width="1350" height="1300" frameborder="0" gesture="media"
allow="encrypted-media" allowfullscreen=""></iframe>    </div>
</body>
</html>
```

report.css

```
@import
url('https://fonts.googleapis.com/css2?family=Cherry+Cream+Soda&display=swap');

body{
    background-color: #f0fbf2;
}
h1{
    font-family: 'Cherry Cream Soda';
    color: #1B4332;
    text-align: center;
```

```
    font-size: 50px;

}
.iframe2{
    border: 2px solid gray;
    padding: 20px 30px;
    display: flex;
    align-items: center;
    justify-content: center;
```

A.2 SCREENSHOTS

A.2.1 WEB PAGE SCREENSHOTS

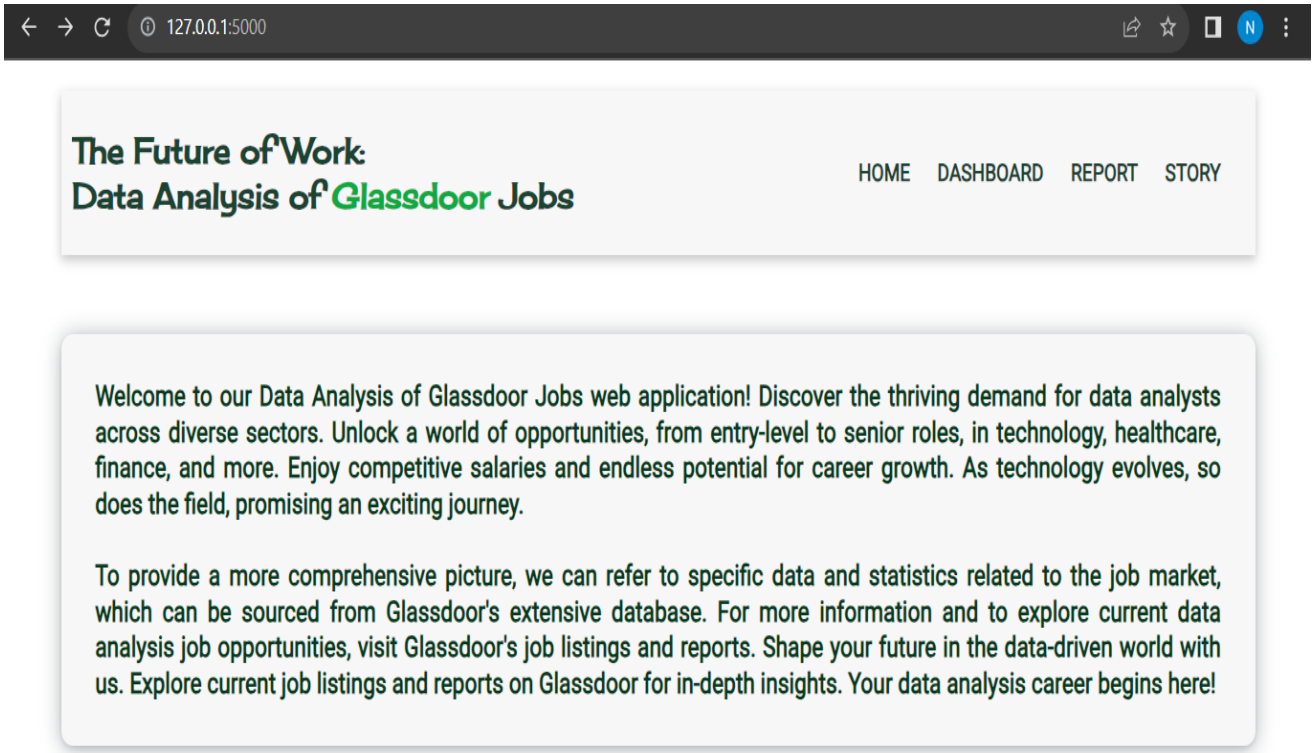
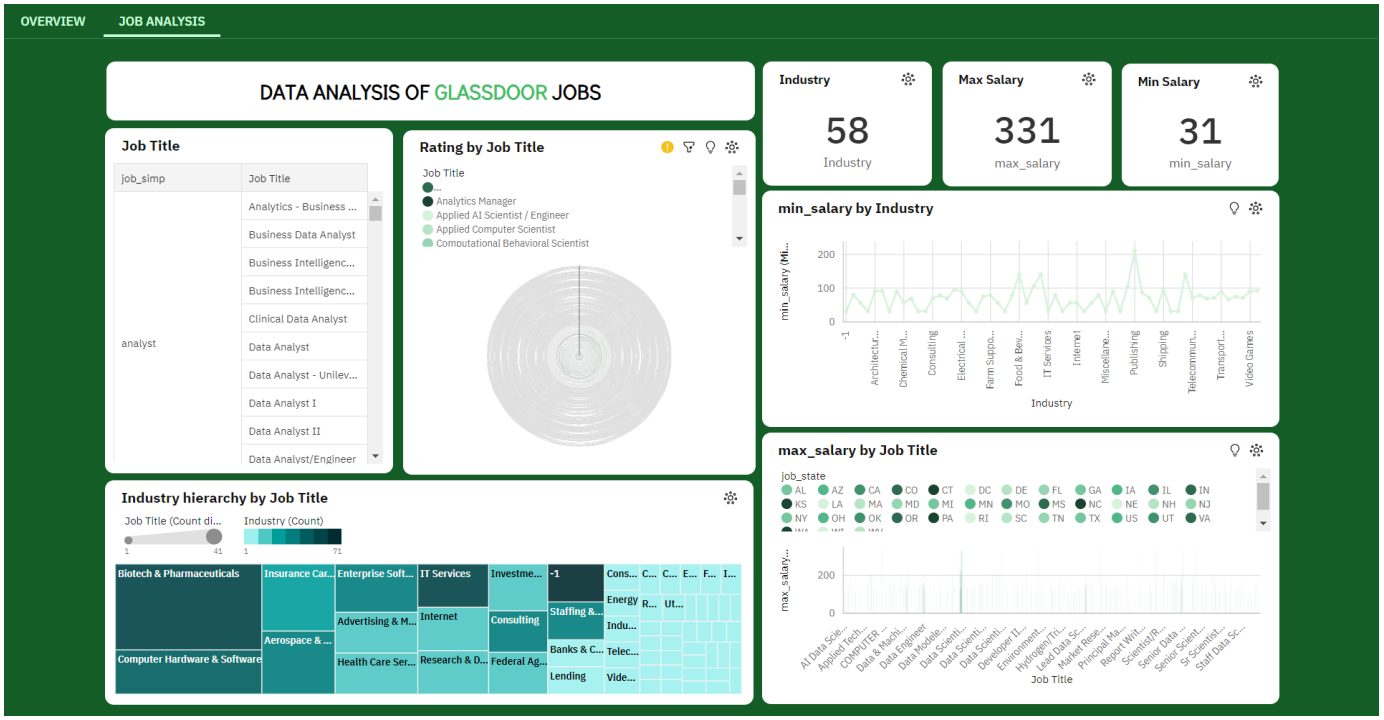
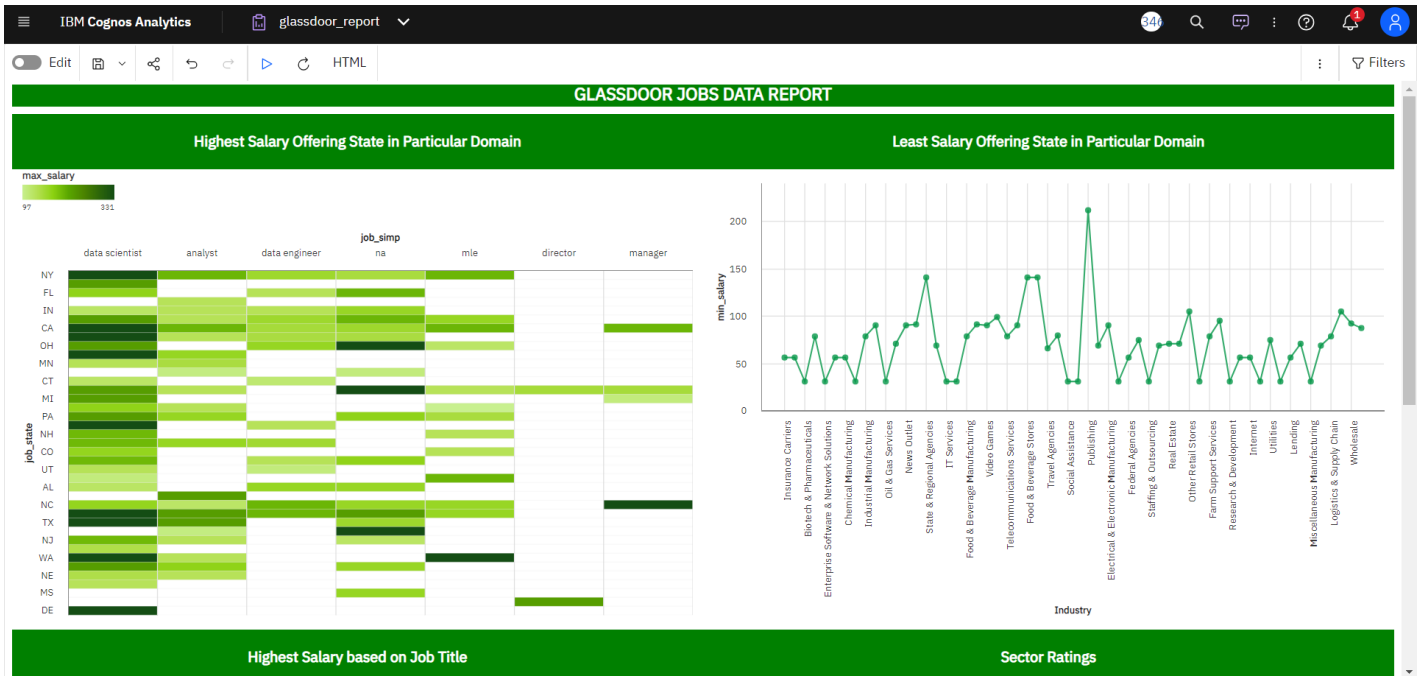


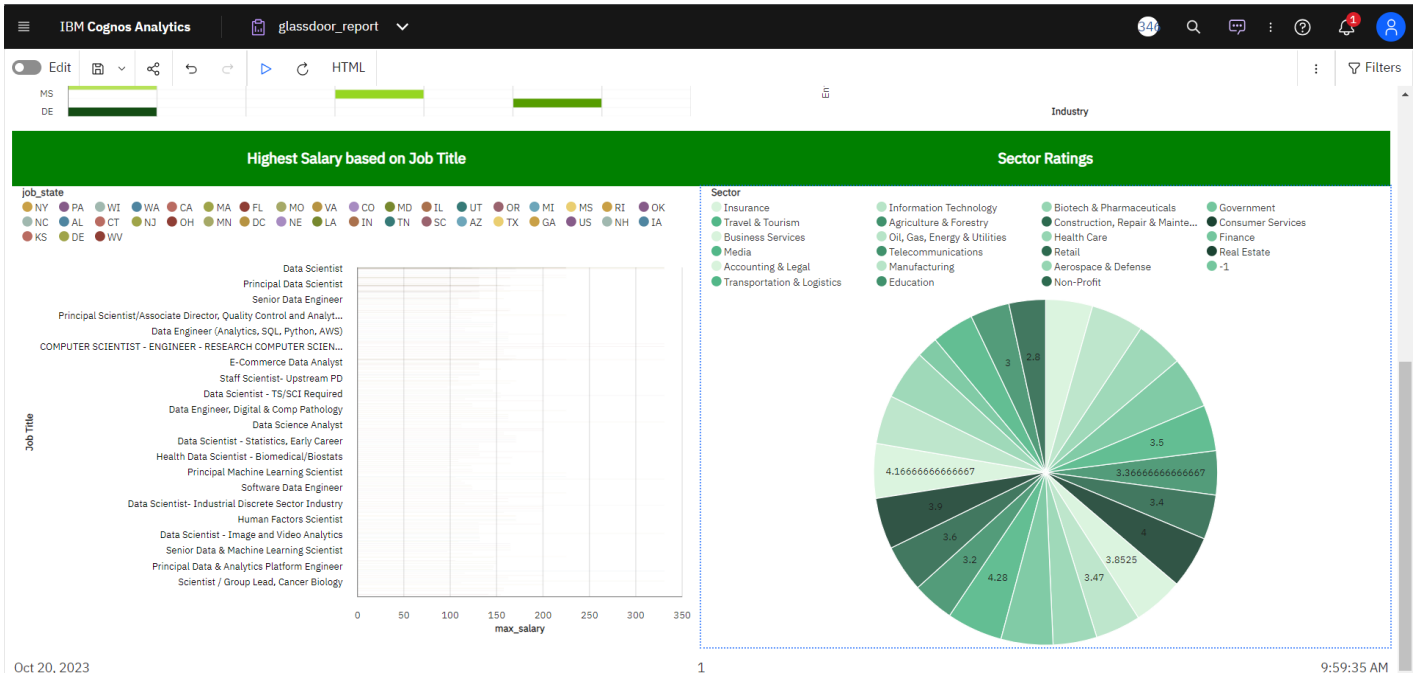
Figure A.2.1.1 Home Page for Website**.**

A.2.2 DASHBOARD

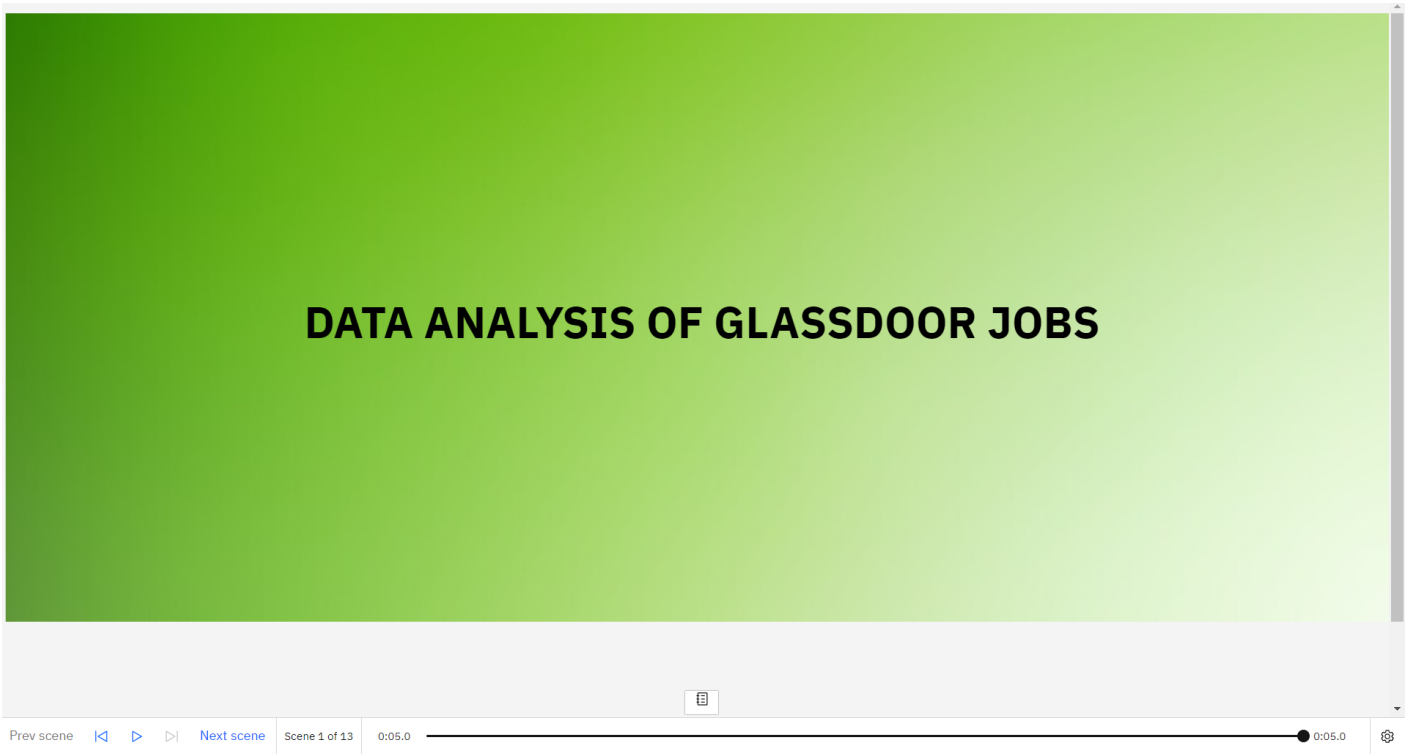


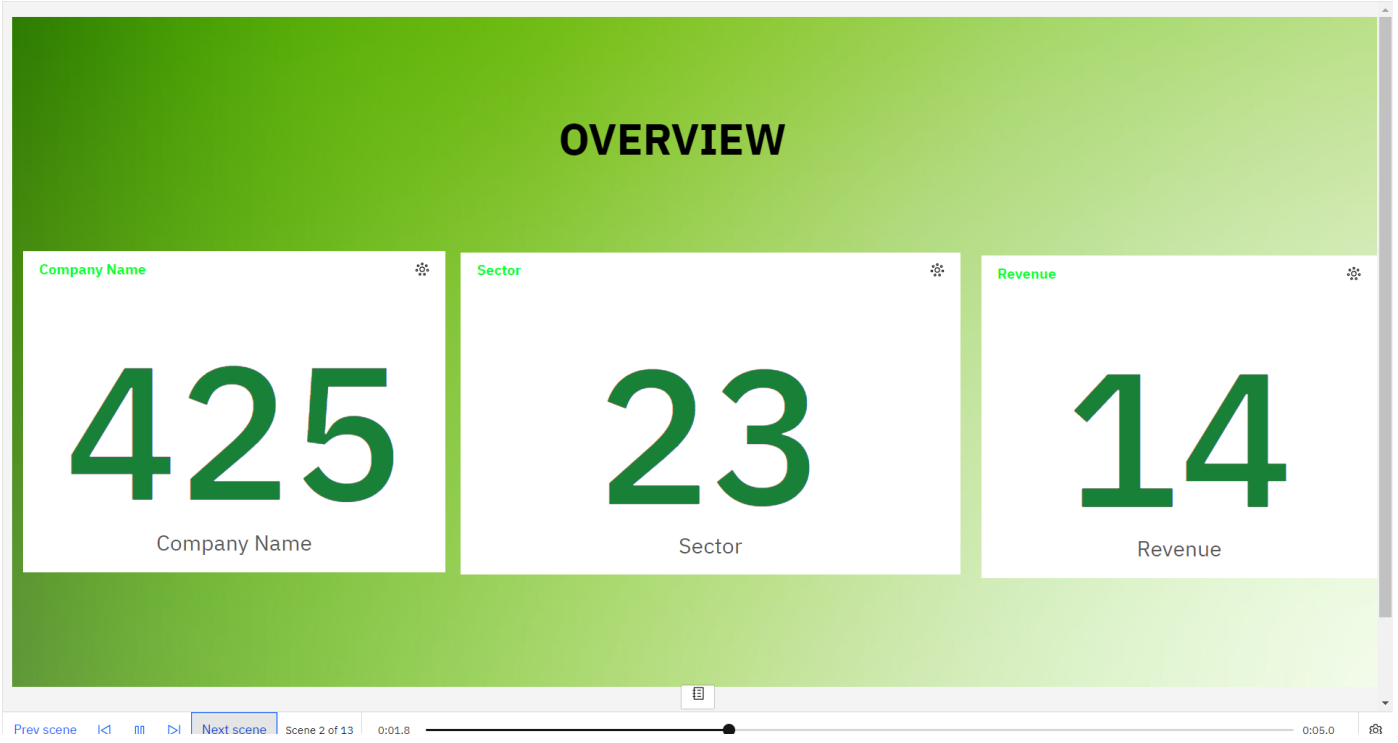
A.2.3 REPORT


IBM Cognos Analytics
glassdoor_report
Edit
HTML
Filters
GLASSDOOR JOBS DATA REPORT
Highest Salary Offering State in Particular Domain
Least Salary Offering State in Particular Domain
max_salary
97
331
job_simp
data scientist
analyst
data engineer
na
mle
director
manager
job_state
NY
FL
IN
CA
OH
MN
CT
MI
PA
NH
CO
UT
AL
NC
TX
NJ
WA
NE
MS
DE
min_salary
200
150
100
50
0
Insurance Carriers
Biotech & Pharmaceuticals
Enterprise Software & Network Solutions
Chemical Manufacturing
Industrial Manufacturing
Oil & Gas Services
News Outlet
State & Regional Agencies
IT Services
Food & Beverage Manufacturing
Video Games
Telecommunications Services
Food & Beverage Stores
Travel Agencies
Social Assistance
Publishing
Electrical & Electronic Manufacturing
Federal Agencies
Staffing & Outsourcing
Real Estate
Other Retail Stores
Farm Support Services
Research & Development
Internet
Utilities
Lending
Miscellaneous Manufacturing
Logistics & Supply Chain
Wholesale
Industry
Highest Salary based on Job Title
Sector Ratings


IBM Cognos Analytics
glassdoor_report
Edit
HTML
Filters
MS
DE
Industry
Highest Salary based on Job Title
Sector Ratings
job_state
NY PA WI WA CA MA FL MO VA CO MD IL UT OR MI MS RI OK
NC AL CT NJ OH MN DC NE LA IN TN SC AZ TX GA US NH IA
KS DE WV
Job Title
Data Scientist
Principal Data Scientist
Senior Data Engineer
Principal Scientist/Associate Director, Quality Control and Analyt...
Data Engineer (Analytics, SQL, Python, AWS)
COMPUTER SCIENTIST - ENGINEER - RESEARCH COMPUTER SCIEN...
E-Commerce Data Analyst
Staff Scientist- Upstream PD
Data Scientist - TS/SCI Required
Data Engineer, Digital & Comp Pathology
Data Science Analyst
Data Scientist - Statistics, Early Career
Health Data Scientist - Biomedical/Biostats
Principal Machine Learning Scientist
Software Data Engineer
Data Scientist- Industrial Discrete Sector Industry
Human Factors Scientist
Data Scientist - Image and Video Analytics
Senior Data & Machine Learning Scientist
Principal Data & Analytics Platform Engineer
Scientist / Group Lead, Cancer Biology
0
50
100
150
200
250
300
350
max_salary
Sector
Insurance
Travel & Tourism
Business Services
Media
Accounting & Legal
Transportation & Logistics
Information Technology
Agriculture & Forestry
Oil, Gas, Energy & Utilities
Telecommunications
Manufacturing
Education
Biotech & Pharmaceuticals
Construction, Repair & Mainte...
Health Care
Retail
Aerospace & Defense
Non-Profit
Government
Consumer Services
Finance
Real Estate
-1
3
2.8
3.5
3.36666666666667
3.4
4
3.8525
3.47
4.28
3.2
3.6
3.9
4.16666666666667
Oct 20, 2023
1
9:59:35 AM

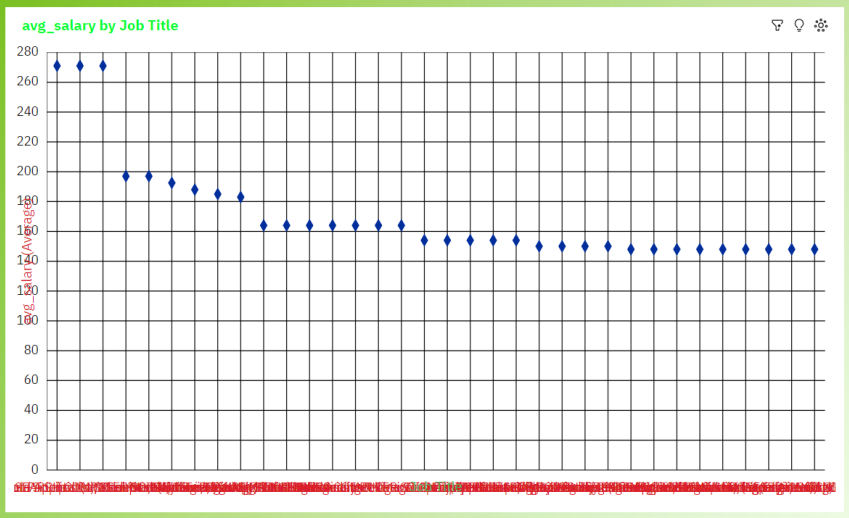
A.2.4 STORY


DATA ANALYSIS OF GLASSDOOR JOBS
Prev scene
Next scene
Scene 1 of 13
0:05.0
0:05.0


OVERVIEW
Company Name
425
Company Name
Sector
23
Sector
Revenue
14
Revenue
Prev scene
Next scene
Scene 2 of 13
0:01.8
0:05.0

AVERAGE SALARY FOR JOB TITLE

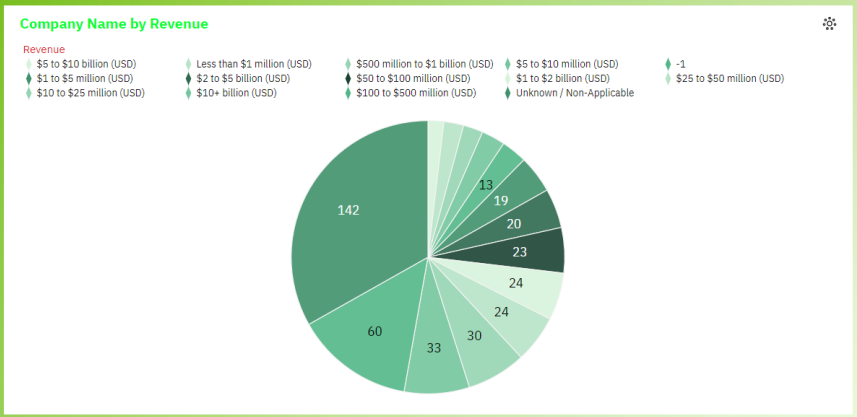
Over all job titles, the average of avg_salary is 169.1. The average values of avg_salary range from 148, occurring when Job Title is Developer III - Data Science, to 271, when Job Title is COMPUTER SCIENTIST - ENGINEER - RESEARCH COMPUTER SCIENTIST - SIGNAL PROCESSING.
ENGINEER - COMPUTER SCIENTIST - RESEARCH COMPUTER SCIENTIST - SIGNAL PROCESSING - SAN ANTONIO OR (8.7 %) and Data Science Software Engineer (8.7 %) are the most frequently occurring categories of Job Title with a combined count of 8 items with avg_salary values (17.4 % of the total).



Prev scene | Next scene | Scene 3 of 13 | 0:05.0 | 0:05.0

COMPANY NAME BASED ON REVENUE

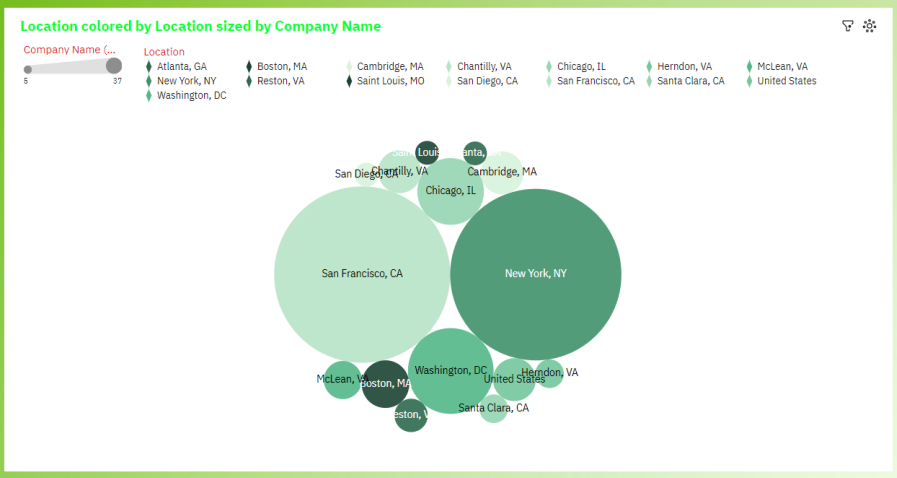
The total number of results for Company Name, across all revenues, is 660.
Unknown / Non-Applicable is the most frequently occurring category of Revenue with a count of 206 items with Company Name values (31.2 % of the total).



Prev scene | Next scene | Scene 4 of 13 | 0:05.0 | 0:05.0

COMPANY NAME BY LOCATION

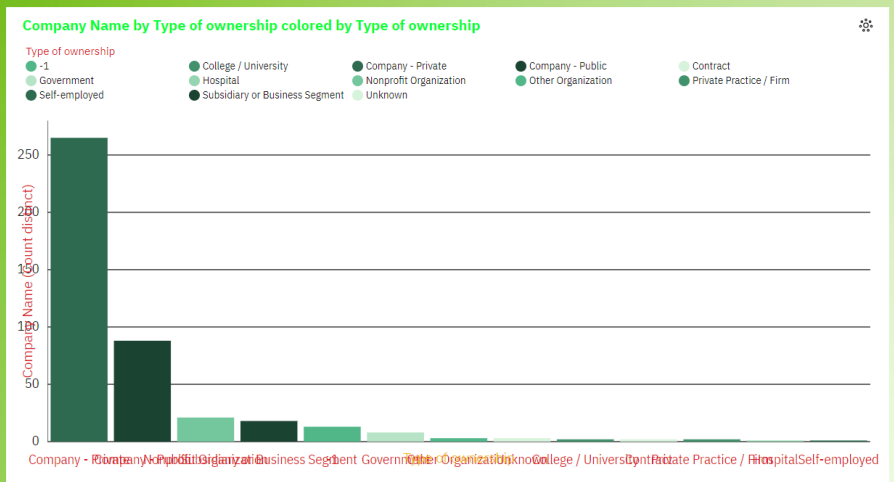
The overall number of results for Company Name is 303.
San Francisco, CA (22.8 %) and New York, NY (16.5 %) are the most frequently occurring categories of Location with a combined count of 119 items with Company Name values (39.3 % of the total).



Prev scene | Next scene | Scene 5 of 13 | 0:05.0 | 0:05.0

TYPE OF OWNERSHIP BASED ON COMPANY NAME

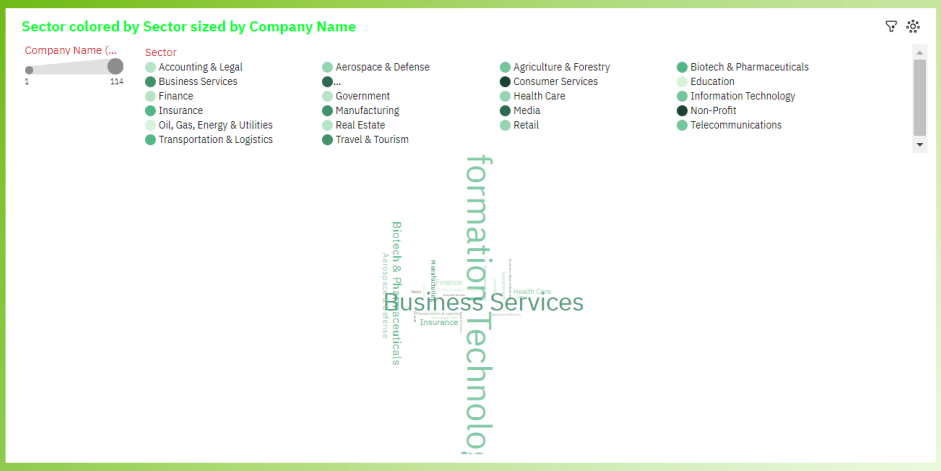
The overall number of results for Company Name is 660. Company - Private is the most frequently occurring category of Type of ownership with a count of 386 items with Company Name values (58.5 % of the total).



Prev scene | Next scene | Scene 6 of 13 | 0:01.8 | 0:05.0

COMPANY NAME BY SECTORS RELATED

The overall number of results for Company Name is 589.
Information Technology is the most frequently occurring category of Sector with a count of 178 items with Company Name values (30.2 % of the total).



Prev scene | Next scene | Scene 7 of 13 | 0:01.8 | 0:05.0

JOB ANALYSIS

Prev scene | Next scene | Scene 8 of 13 | 0:01.7 | 0:05.0

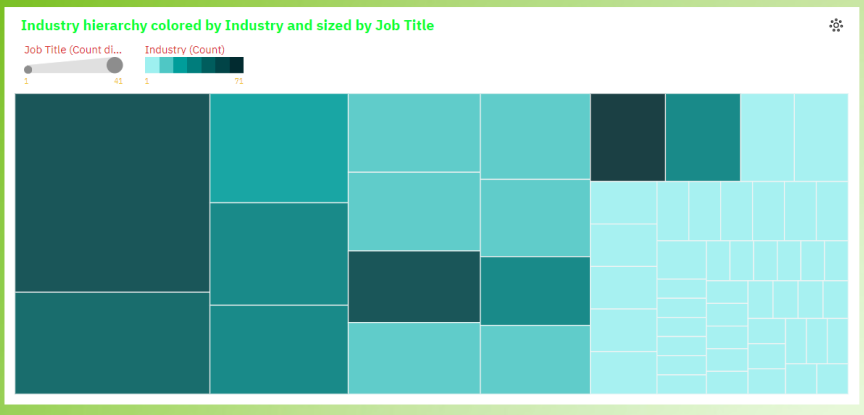
RATINGS FOR JOB TITLES SELECTED

Over all job titles and job titles, the average of Rating is 4.6.
The average values of Rating range from 4.2 to 5.
Senior Data Engineer is the most frequently occurring category of Job Title with a count of 5 items with Rating values (6.8 % of the total).

Prev scene | Next scene | Scene 9 of 13 | 0:02.5 | 0:05.0

COUNT OF TOTAL NUMBER OF JOB TITLES

The total number of results for Job Title, across all industries, is 660.
-1 (10.8 %), Biotech & Pharmaceuticals (10 %), IT Services (9.1 %), and Computer Hardware & Software (8.3 %) are the most frequently occurring categories of Industry with a combined count of 252 items with Job Title values (38.2 % of the total).



Prev scene | Next scene | Scene 10 of 13 | 0:04.6 | 0:05.0

TABLE BETWEENN JOB_SIMP AND JOB TITLE

The table includes columns for job_id, job_simp (simplified job title), job_title (detailed job title), company_name, location, salary, and job_description. This table provides a structured way to store and present information about different job listings related to data analysis .

job_simp and Job Title

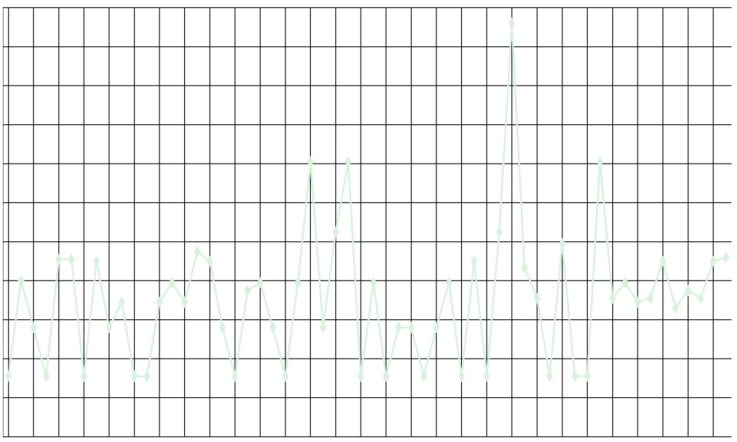
job_simp	Job Title
analyst	Analytics - Business Assurance Data Analyst
	Business Data Analyst
	Business Intelligence Analyst
	Business Intelligence Analyst I- Data Insights
	Clinical Data Analyst
	Data Analyst
	Data Analyst - Unilever Prestige
	Data Analyst I
	Data Analyst II
	Data Analyst/Engineer
	Data Science Analyst
	Diversity and Inclusion Data Analyst
	E-Commerce Data Analyst
	Enterprise Data Analyst (Enterprise Portfolio Management Office)
	Equity Data Insights Analyst - Quantitative Analyst

Prev scene | Next scene | Scene 11 of 13 | 0:02.0 | 0:05.0

MINIMUM SALARY FOR EACH INDUSTRY

The total number of results for min_salary, across all industries, is 660.
The smallest value of min_salary is 31, occurring when Industry is -1.
-1 (10.8 %), Biotech & Pharmaceuticals (10 %), IT Services (9.1 %), and Computer Hardware & Software (8.3 %) are the most frequently occurring categories of Industry with a combined count of 252 items with min_salary values (38.2 % of the total).

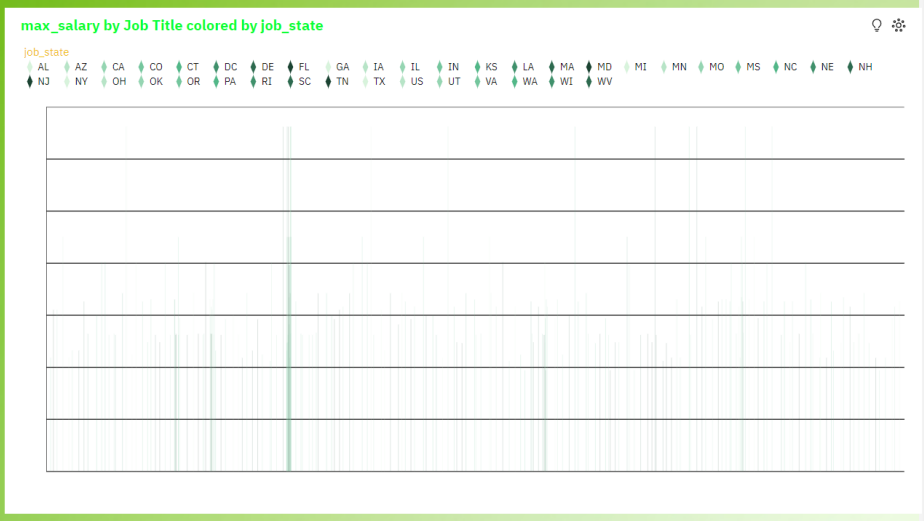
min_salary by Industry



Prev scene | Next scene | Scene 12 of 13 | 0:02.7 | 0:05.0

MAXIMUM SALARY FOR JOB TITLE

The total number of results for max_salary, across all job titles, is 660.
The largest value of max_salary is 331 and occurs in COMPUTER SCIENTIST - ENGINEER - RESEARCH COMPUTER SCIENTIST - SIGNAL PROCESSING and OH.
Data Scientist is the most frequently occurring category of Job Title with a count of 333 items with max_salary values (50.5 % of the total).
CA is the most frequently occurring category of job_state with a count of 165 items with max_salary values (25 % of the total).



Prev scene | Next scene | Scene 13 of 13 | 0:02.2 | 0:05.0

GITHUB & PROJECT DEMO LINK

GITHUB LINK:

https://github.com/Pavithra2905/NaanMudhalvan-DataAnalytics-NM2023TMID02095

PROJECT DEMO LINK:

https://drive.google.com/drive/folders/14h4GPydVcrFHYfZpqN0-7yX3b7liW-2l

REFERENCE

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[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*.