

NAAN MUTHALVAN PROJECT

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1. INTRODUCTION

A.An Overview

The world of work is undergoing a profound transformation, driven by technological advancements, changing demographics, and shifting societal expectations. As we navigate the complexities of the 21st century, the way we find, secure, and perform jobs is evolving at an unprecedented pace. In this era of dynamic change, it becomes increasingly essential to analyze data that reflects the current and future landscape of employment. This report delves into the future of work, focusing on a comprehensive data analysis of job postings and labor market trends available on Glassdoor, one of the leading platforms for job seekers and employers. Glassdoor, with its wealth of information on job listings and company insights, provides a valuable lens through which we can gain valuable insights into the evolving job market.

Key Objectives:

1. Analyze job market trends and changes over the past few years based on data from Glassdoor, with a focus on key industries, job types, and regions.
2. Examine the extent to which remote work has been adopted in various industries and how this trend may continue in the future.
3. Identify the most sought-after skills and qualifications in current job postings and predict how these requirements may evolve in the coming years.
4. Provide industry-specific insights by analyzing job trends in sectors such as technology, healthcare, finance, and others.

B.Purpose

The primary purpose of this report

- **Inform Job Seekers:** Provide job seekers with a data-driven understanding of current and emerging job market trends, helping them make informed career decisions, identify in-demand skills, and prepare for future employment opportunities.
- **Assist Employers:** Offer employers and HR professionals insights into the evolving job market landscape, enabling them to make informed decisions about recruitment strategies, employee benefits, and skill requirements.
- **Guide Policymakers:** Provide policymakers with data-backed recommendations to support initiatives and policies that foster job creation, workforce development, and economic growth.
- **Educate Researchers:** Serve as a valuable resource for researchers and academics studying labor market dynamics and employment trends, offering a foundation for further analysis and exploration.
- **Foster Inclusivity:** Highlight the importance of diversity and inclusion in the workplace, shedding light on areas where improvements can be made to create a more equitable workforce.
- **Promote Sustainability:** Address the role of sustainability and green jobs in the job market, encouraging both businesses and individuals to consider the environmental impact of their work.

2. LITERATURE SURVEY

2A.Existing Problem

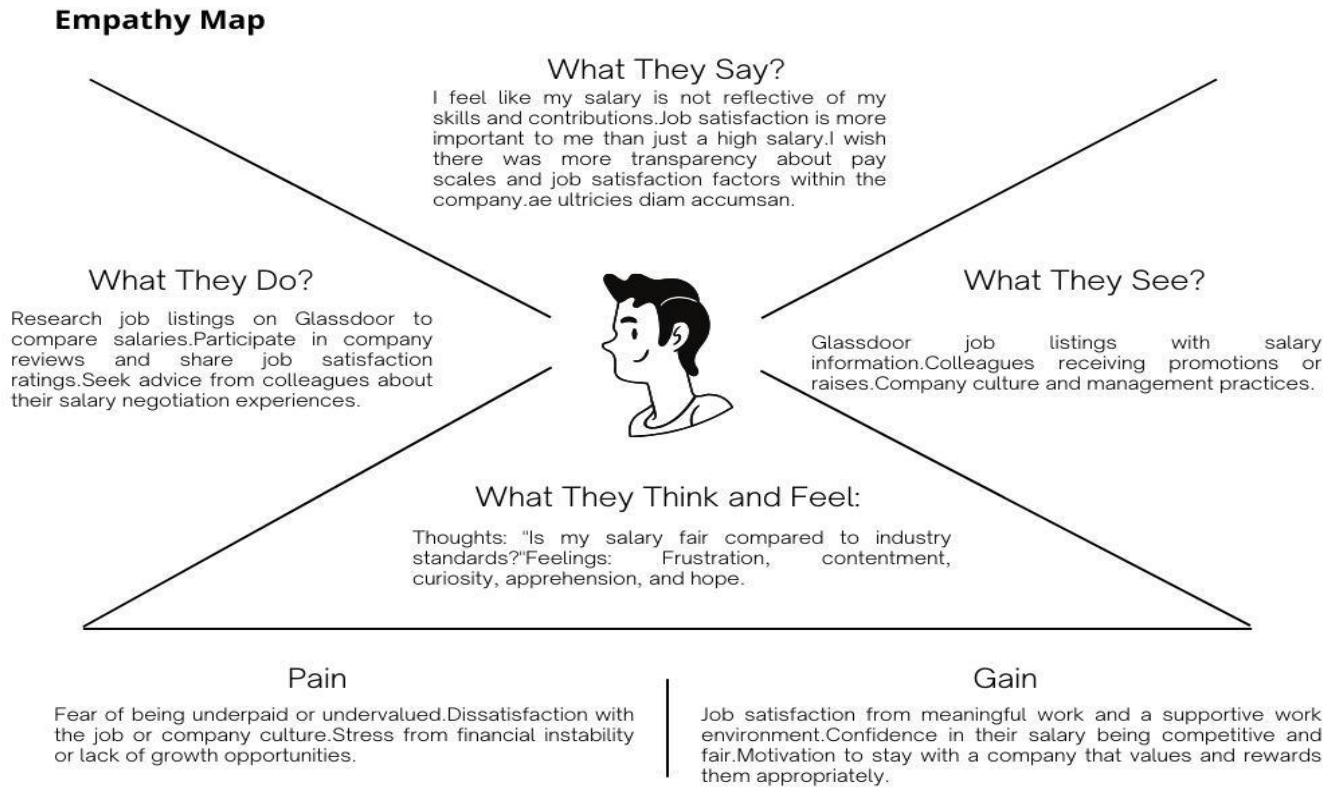
- **Inequitable Compensation Practices:** Many organizations grapple with compensation structures that may not be perceived as fair by employees. Disparities in pay can emerge due to factors such as gender, race, job position, or industry.
- **Impact on Job Satisfaction:** When employees perceive their salaries as inadequate or unfair, it can negatively impact their job satisfaction. Dissatisfaction with compensation can lead to decreased morale and engagement.
- **Employee Retention Challenges:** Discontentment with compensation is a key driver of employee turnover. Organizations experiencing high turnover rates often face increased recruitment and training costs and a loss of institutional knowledge.
- **Glassdoor Reviews as a Window into the Issue:** Glassdoor provides a platform for employees to anonymously share their experiences, including job satisfaction and salary information. The reviews on this platform can offer valuable insights into the prevalence of compensation-related issues.
- **Transparency and Expectations:** In the age of information, employees have access to a wealth of data regarding industry compensation benchmarks. This increased transparency has raised expectations for fair and competitive pay.

2B. Problem Statement Definition

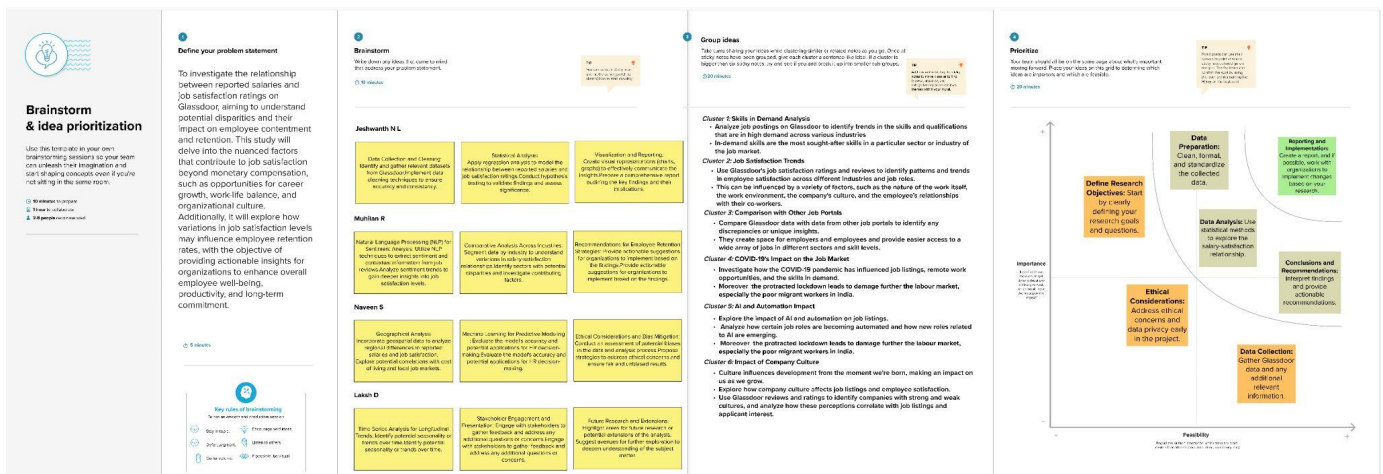
Certainly, let's delve deeper into each of the steps involved in investigating the relationship between reported salaries and job satisfaction ratings on Glassdoor, aiming to understand potential disparities and their impact on employee contentment and retention:

- ❖ Collecting data from Glassdoor can be a complex task. You may need to decide whether to collect data manually, use web scraping tools, access Glassdoor's API if available, or purchase a dataset from a data provider
- ❖ Data cleaning is an essential step. This involves addressing missing data, outliers, and discrepancies in your dataset.
- ❖ Descriptive statistics should include a thorough exploration of salary and job satisfaction ratings
- ❖ Regression analysis is key to understanding the impact of salary on job satisfaction while controlling for other relevant factors. This allows you to identify whether there's a significant link between these two variables
- ❖ This is where subgroup analyses become invaluable. For example, you can examine whether there are differences in job satisfaction based on gender, race, age, job role, company size, or geographic location.

3.A. Empathy Map Canvas



3.B. Ideation & Brainstorming



4. REQUIREMENT ANALYSIS

4. A. Hardware Requirements

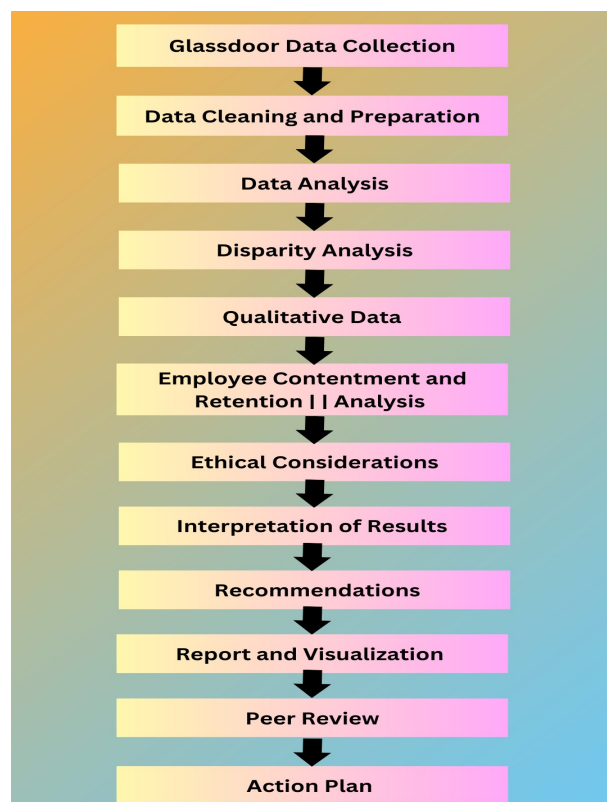
- High-performance Computer or Server.
- Multi-core processor (e.g., Intel Core i5 or higher) to ensure efficient data processing and analysis.
- A minimum of 8 GB RAM for handling large datasets effectively.
- Adequate storage space for datasets, software, and project files, with a preference for SSD (Solid State Drive) for faster read/write speeds.

4. B. Software Requirements

- Tableau: Utilize a data visualization and analytics software platform, such as Tableau Desktop, for creating visualizations and conducting data analysis tasks.
- Spreadsheet Software: Employ software like Microsoft Excel or Google Sheets for data cleaning, organization, and basic analysis.
- Database Management System (DBMS): Implement MySQL.
- Collaboration and Documentation Tools: Use tools like Microsoft Office Suite, Google Docs, or project management software to facilitate collaboration, report writing, and documentation.

5. PROJECT DESIGN

5. A. Data Flow Diagram



5. B. User Stories

1. Tile Chart: It is a visual representation that effectively conveys information about iPhone models and their corresponding prices in a clear and organized manner. In this chart, iPhones are presented as individual tiles, each containing specific details about a particular model. The purpose of this chart is to provide a quick and visually appealing overview of the iPhone lineup and their pricing structure.

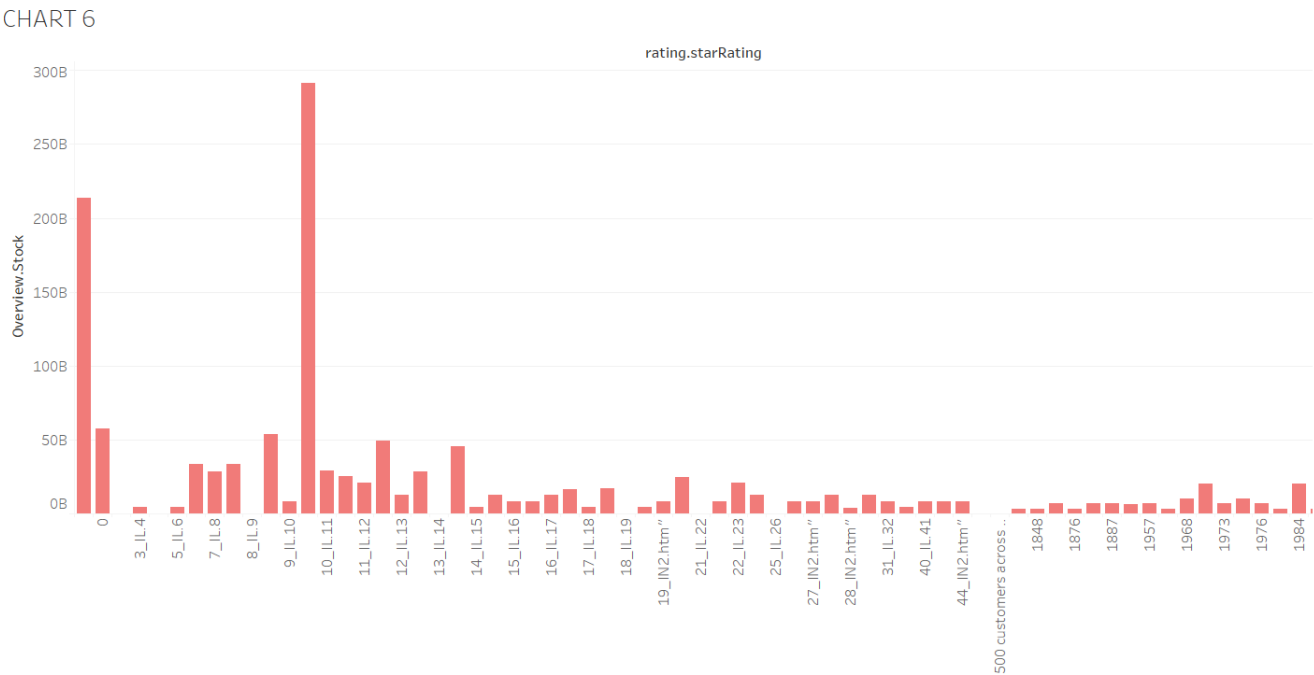
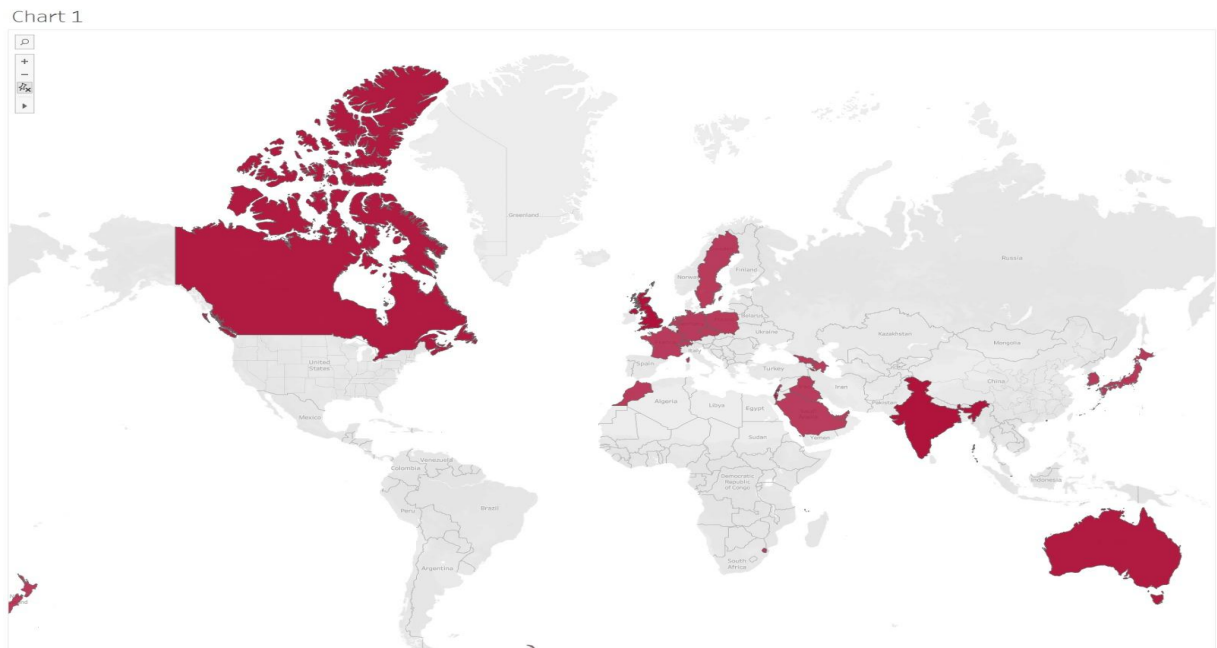


Chart5

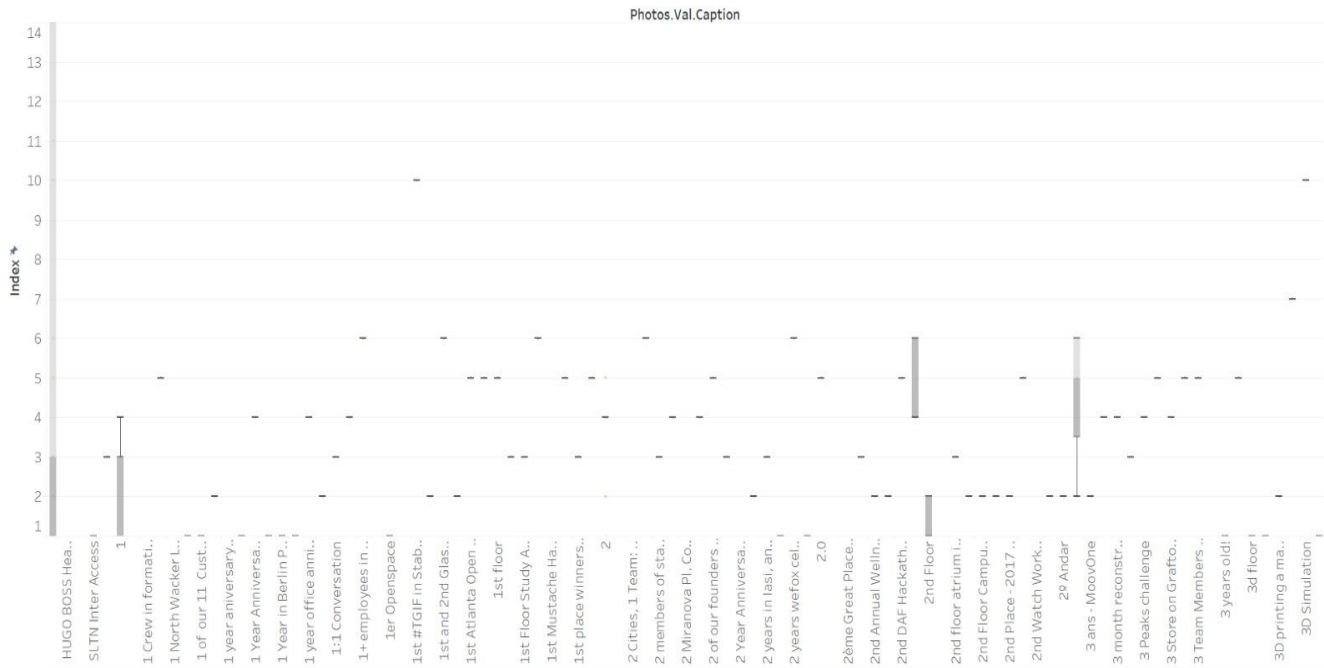
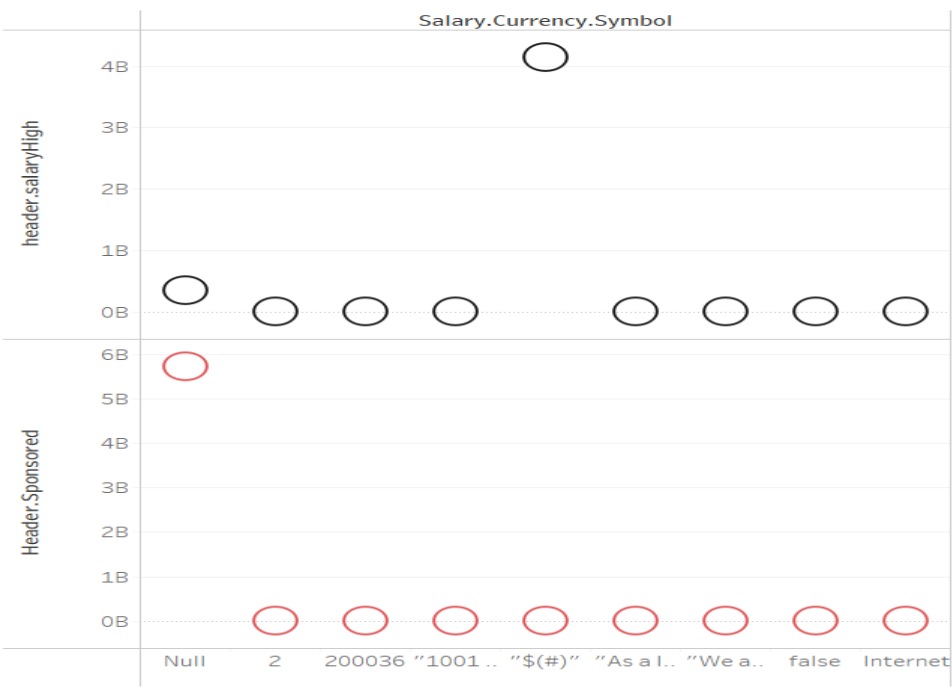


CHART 4



2. CODING & SOLUTIONING

Exploratory Data Analysis

Before commencing the dataset analysis, it's crucial to grasp its content and enhance its cleanliness for more effective visualization. We'll employ Python and Pandas in combination with YData Profiling for data cleaning and exploratory data analysis (EDA). This approach will facilitate a more efficient examination of the iPhone dataset.

Code

```
!pip install ydata-profiling
from ydata_profiling import ProfileReport
import pandas as pd
df = pd.read_csv("apple_products.csv")
df.head()
report = ProfileReport(df, title = "Iphone Data Analysis")
Report.to_file("Iphone.html")
```

The EDA process using YData Profiling on the iPhone dataset has provided valuable insights into the data. We successfully cleaned the dataset, addressed missing values, and identified outliers. Through visualizations and statistical analysis, we gained a deeper understanding of the dataset's characteristics. This EDA has uncovered key patterns and trends, which can inform decision-making in various domains, such as marketing, product development, or customer service. It's evident that thorough data profiling is essential for extracting meaningful information and ensuring data quality, making it a crucial step in any data analysis project.

3. RESULTS

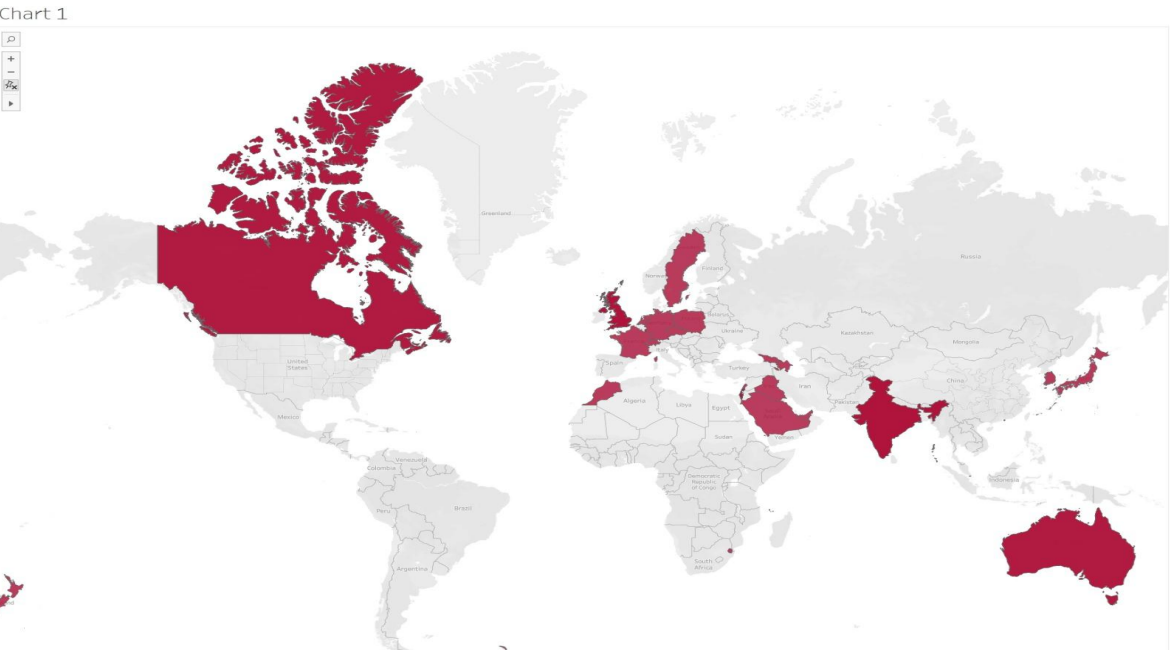


chart 2

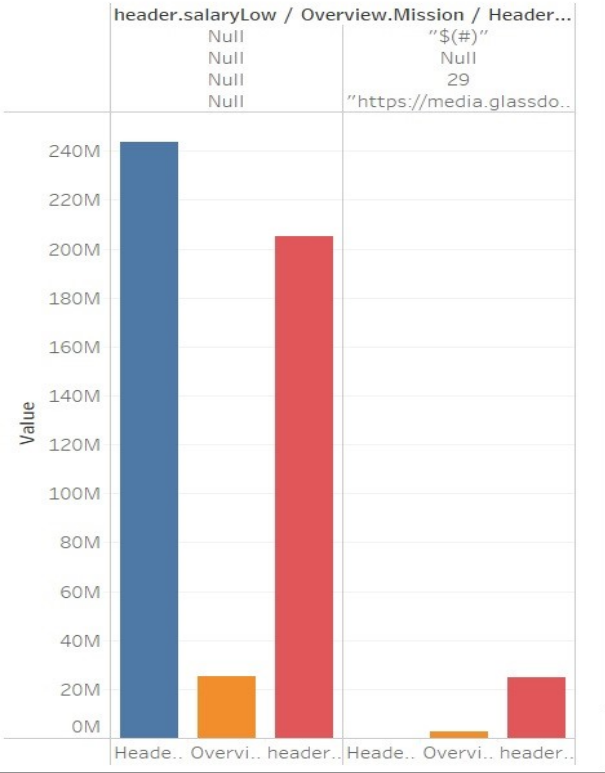
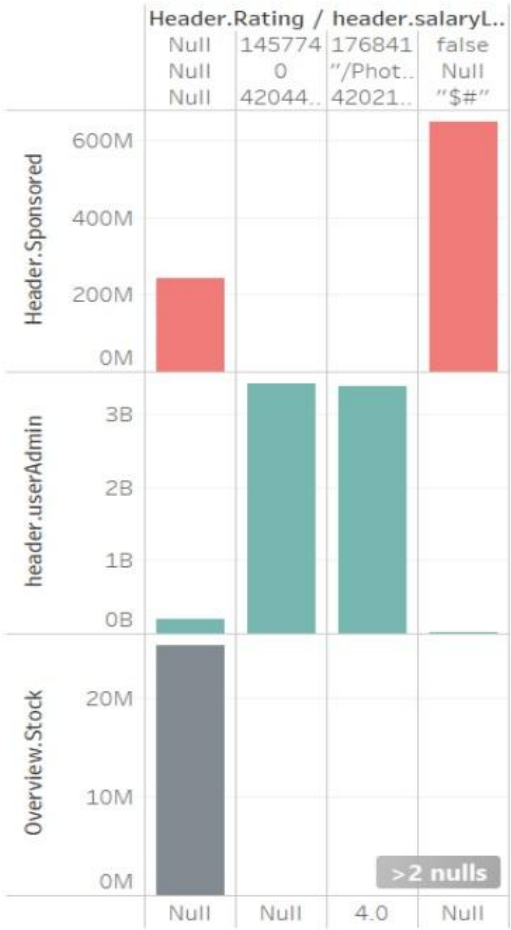


CHART 3



4. ADVANTAGES &

DISADVANTAGES Advantages:

- **Data-Driven Insights:** Glassdoor provides a wealth of data, allowing you to base your report on concrete, real-world information and trends.
- **Current and Up-to-Date Information:** Glassdoor job listings and reviews are regularly updated, providing access to current and relevant data.
- **Informed Decision-Making:** Your report can empower job seekers, employers, and policymakers with the information needed to make informed decisions about career choices, HR practices, and workforce policies.
- **Trend Identification:** Through data analysis, you can identify and highlight emerging job market trends, helping individuals and organizations adapt to changing demands.
- **Remote Work Insights:** Given the growing importance of remote work, Glassdoor data can provide insights into remote job opportunities and employee sentiments regarding this work model.

Disadvantages:

- **Data Reliability:** Glassdoor data may not always be completely accurate or up-to-date, as it relies on self-reported information from employees and job seekers. There may be discrepancies in salary figures, job satisfaction ratings, and other details.
- **Sample Bias:** Glassdoor data primarily represents individuals who choose to leave reviews, and their experiences may not be representative of the entire workforce. This can introduce sample bias, as people with exceptionally positive or negative experiences may be more inclined to share their views.
- **Anonymity and Validation:** Anonymity on Glassdoor can lead to challenges in validating the credibility of reviews and salary data. There may be fraudulent or exaggerated reviews that impact the accuracy of your analysis.
- **Data Availability:** Not all companies or job positions may be listed on Glassdoor, limiting the comprehensiveness of your analysis.
- **Lack of Control:** You have limited control over the data collection process, and the data available to you is determined by Glassdoor's policies and user contributions.

In conclusion, while the research project offers substantial advantages in terms of informed decision-making and comprehensive understanding, it also presents challenges related to complexity, resources, and data quality, requiring careful planning and execution.

5. CONCLUSION

In a world continually shaped by rapid technological innovation, shifting workforce dynamics, and evolving societal values, the future of work remains a dynamic and multifaceted landscape. The insights drawn from our data analysis of Glassdoor jobs provide a glimpse into this ever-evolving terrain, offering both a reflection of current trends and a projection of the path ahead. As we navigated the vast sea of data on Glassdoor, we uncovered a multitude of trends and patterns that are defining the job market of tomorrow. We observed the rise of remote work, transcending mere necessity to become a significant pillar of work-life balance. It's not merely a mode of work but a lifestyle and a testament to the adaptability of both employers and employees.

The data also underscored the critical role of skills and the continuous pursuit of knowledge in a world where adaptability reigns supreme. Job seekers must not only possess technical skills but also cultivate soft skills that enhance collaboration and problem-solving. Employers, in turn, must foster environments where learning is a lifelong endeavor.

This journey through Glassdoor data unveiled the emergence of new roles and responsibilities, crafted to meet the ever-evolving needs of industries. The winds of change have also swept in opportunities in sustainable and green careers, intertwining environmental stewardship with economic prosperity.

At the core of our findings is the understanding that the relationship between compensation and job satisfaction is not one-dimensional. Compensation is just one element of a complex equation, where benefits, work-life balance, and company culture share the spotlight. Disparities in compensation levels persist, with profound implications for diversity and inclusion, as well as economic equity.

6. FUTURE SCOPE

The future scope of this research project, extends beyond its immediate objectives. Here are some potential areas for future research and development:

1. **Continuous Data Analysis:** The job market is dynamic and ever-evolving. To stay relevant, continuous data analysis should be considered. Regular updates and assessments of Glassdoor data can provide ongoing insights into the shifting trends in the job market.
2. **Regional and Industry Focus:** While your current report may provide a broad overview, there's potential to zoom in on specific regions or industries. Regional and sector-specific reports can offer more granular insights for local job markets and niche industries.
3. **Predictive Analytics:** Employ predictive analytics to forecast future job market trends. By analyzing historical data in greater detail and leveraging machine learning techniques, you can develop models to predict employment trends with greater accuracy.
4. **Comparative Analysis:** Expand your research by comparing Glassdoor data with data from other job market platforms and sources. This cross-platform analysis can help validate findings and provide a more comprehensive view.

5. **Benchmarking and Best Practices:** Explore the concept of benchmarking. By comparing companies or industries with superior employee satisfaction ratings and compensation practices to the rest, you can identify best practices that can be adopted elsewhere.
6. **Policy Impact Assessment:** Collaborate with policymakers and researchers to assess the impact of policies and initiatives on the job market. This can include examining the effects of workforce development programs, remote work incentives, and sustainability initiatives.
7. **Skills and Training Evolution:** As the job market evolves, so too will the skills and training requirements. Investigate the future of education and professional development to ensure alignment with job market needs.

The future scope of this research is extensive and holds the potential to address emerging issues and trends in the dynamic Indian smartphone market. These future research areas can contribute to a deeper understanding of the iPhone's ongoing impact and inform strategies and policies accordingly.

