



# **Real -Time Job Analytics Portal REPORT**

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# 1. Introduction

## 1.1 Overview

This report presents an analysis of Job Portal Visualization in real-time in the job sector as conducted during the summer internship program at Nullclass Ed Tech Pvt Ltd.

## 1.2 Intern details

Intern:	Sakshi Singhal
Internship Period:	7 July 2024 – 7 September 2024

# 2. Background

**1. Emerging Need for Job Market Insights:** With rapid changes in the job market, there is a growing demand for real-time data to help job seekers, recruiters, and policymakers make informed decisions.

**2. Data-Driven Decision Making:** The integration of data analysis into job market trends enables more precise forecasting and strategic planning, leading to better alignment between workforce supply and demand.

**3. Leveraging Tableau for Visualization:** Utilizing Tableau allows for the creation of interactive and visually appealing charts, making complex job market data easily understandable and accessible to users on a web-based platform.

### 3. Learning Objectives

1. **Mastering Data Visualization with Tableau:** Develop the ability to create dynamic and interactive charts that effectively communicate complex job market data and trends.
2. **Enhancing Data Analysis Skills:** Gain proficiency in analyzing real-time job market data, identifying key patterns, and translating insights into actionable strategies.
3. **Integrating Data Visualizations into Web Platforms:** Learn the technical skills required to embed Tableau dashboards into a website, ensuring a seamless user experience and real-time data accessibility.

### 4. Activities & Tasks

#### 4.1 Activities

1. **Data Collection and Preparation:** Gather and clean job market data from various sources, ensuring it is accurate, consistent, and ready for analysis in Tableau.
2. **Chart Creation and Dashboard Development:** Use Tableau to design and build interactive charts and dashboards that visually represent job market trends, demands, and other key metrics.
3. **Website Integration and Deployment:** Embed the Tableau visualizations into a web portal and host the site on a platform like

Netlify, ensuring the dashboards are accessible and responsive to users.

## 4.2 Tasks

1. Draw a chart between Preference and work type where work type='Intern' and latitude should be below 10 and county name should not start with A, B, C and D. This chart should not work at 1 PM to 2 PM as well as 6 Pm to 7PM apart from that this chart should work on all timing. The job title should not contain more than 10 words and company size should be below 50000.

2. Draw a chart between company size and company name where company size<50000 and job title should be mechanical engineer and experience should be more than 5 years and country should be Asian as well as salary should be more than \$50k and the work type should be both part time and full time and ignore all other work types and the preference should be male .We should filter candidates those who are applied on idealist and this chart should work on only between 3 Pm to 6 Pm.

3. Draw a chart for top 10 companies who have max Data Engineer as Role and Data scientist as Job title and the country name should not have any Asian countries and preference should be female only. We should ignore the countries which starting with letter 'C' and latitude is below 10. The job posting date should be between 01/01/2023 to 06/01/2023. The qualification should be B.Tech and we should ignore other qualifications.

4. Draw a chart where qualification='B.Tech, M.Tech, PhD' and work type='Full time'. Job title should be starting with letter 'D' and

preference should be a Male. The company size should more than 80000. The contact person should be starting with letter 'A' and job portal should be indeed . We need to place a latitude and longitude and if we click on latitude and longitude, we will open a map and show the exact location.

5. Draw a chart where country='India and Germany' , qualification='B.Tech' and work type='Full time' where experience should be more than 2 years and job should be Data Science and salary range should be more than \$10k . The India details should be on orange colour and Germany details should be on green colour. The preference should be female. The job posting date should be below 08/01/2023 and job portal should be indeed . This chart should swap colour after 12 PM to 6 PM .

## 5. Skills & Competencies

### 5.1 Skills

1. **Tableau Proficiency:** Ability to create, customize, and optimize data visualizations and interactive dashboards using Tableau.

2. **Data Analysis and Interpretation:** Strong skills in analyzing job market data, identifying trends, and deriving actionable insights from complex datasets.

3. **Web Integration and Deployment:** Technical expertise in embedding Tableau dashboards into web platforms and deploying them on hosting services like Netlify.

## 5.2 Competencies

1. **Analytical Thinking:** Ability to critically assess job market data, identify patterns, and generate insights that inform strategic decisions.

2. **Technical Expertise:** Strong competency in using Tableau for data visualization, along with skills in data management and web integration.

3. **Attention to Detail:** Precision in handling data, ensuring accuracy in analysis, and creating clear, effective visualizations that convey complex information concisely.

## 6. Feedback & Evidence

### 6.1 Feedback

1. **Effective Use of Tableau:** The project demonstrates a strong command of Tableau, with well-crafted and insightful visualizations that effectively present complex job market data.

2. **Comprehensive Data Analysis:** The analysis is thorough, providing valuable insights that are both actionable and relevant to the job market, aiding in better decision-making for stakeholders.

3. **Seamless Integration:** The successful embedding of Tableau dashboards into the web portal ensures a user-friendly experience, making real-time data easily accessible to users.

## 6.2 Evidences

1. Interactive Tableau Dashboards: Screenshots or links to the live dashboards created in Tableau, showcasing various charts and visualizations that provide insights into the job market.

2. Data Analysis Reports: Documentation or snapshots of the data analysis process, including the datasets used, key findings, and how the data was prepared and interpreted.

3. Website Deployment Proof: A link to the hosted website on Netlify or another platform, demonstrating the successful integration of the Tableau visualizations into a functional web portal.

## 7. Challenges & Solutions

### 1. Challenge: Data Quality Issues

**Solution:** Implement robust data cleaning and preprocessing techniques to ensure accuracy and consistency before analysis in Tableau.

### 2. Challenge: Handling Large Datasets

**Solution:** Optimize Tableau performance by using data extracts,



aggregating data where possible, and employing efficient querying techniques.

### **3. Challenge: Ensuring Real-Time Data Updates**

**Solution:** Set up automated data pipelines to regularly refresh the data, keeping the dashboards up-to-date with the latest job market trends.

### **4. Challenge: Complex Data Visualization Requirements**

**Solution:** Utilize advanced Tableau features like calculated fields, filters, and custom visualizations to meet specific project needs and improve data representation.

### **5. Challenge: Seamless Web Integration**

**Solution:** Ensure proper embedding of Tableau dashboards into the website, testing for compatibility and responsiveness across different devices and browsers.

## **8. Outcomes & Impacts**

### **8.1 Possible Outcomes**

**1. Interactive Dashboards:** Creation of user-friendly, interactive Tableau dashboards that provide real-time insights into the job market.

2. **Enhanced Decision-Making:** Improved ability for users to make data-driven decisions based on clear visual representations of job market trends and patterns.

3. **Increased User Engagement:** Higher user engagement on the website due to visually appealing and easily navigable charts and dashboards.

## 8.2 Potential Impacts

1. **Informed Career and Hiring Decisions:** Empower job seekers, employers, and recruiters to make more informed decisions based on real-time job market data and trends.

2. **Market Transparency:** Increase transparency in the job market by providing accessible, up-to-date insights, helping to align workforce supply with demand.

3. **Economic and Policy Influence:** Support economic planning and policy-making by offering data-driven insights into employment trends, skill demands, and industry shifts.

## 9. Conclusion

1. **Effective Visualization:** Utilizing Tableau for creating interactive, real-time job market dashboards enhances data interpretation and user engagement.

2. **Informed Decisions:** The project empowers stakeholders with actionable insights, driving better decision-making and strategic planning.

3. **User-Friendly Integration:** Seamlessly integrating Tableau visualizations into a website and hosting on Netlify ensures a smooth, responsive, and accessible user experience.

4. **Market Competitiveness:** Providing up-to-date job analytics offers a competitive edge, attracting and retaining a diverse user base.

5. **Scalable Solution:** The project establishes a scalable and robust framework for ongoing job market analysis and future enhancements.