

HR DATABASE INSIGHTS THROUGH INTERACTIVE TABLEAU DASHBOARD

Content:

- ✓ Project objective
- ✓ Build Data source and Calculated fields
- ✓ Build Dynamic charts and interactive visuals
- ✓ Dashboard designing
- ✓ Key analytical & Data driven insights supporting the objectives
- ✓ Recommendations

Tableau Public Link →



GitHub repository →



PROJECT OBJECTIVE

- ✓ Provide clear, actionable HR analytics for decision-making
- ✓ Track hiring and termination trends by year, department, and demographics
- ✓ Reduce employee turnover through data-driven insights
- ✓ Optimize staffing across all departments
- ✓ Promote diversity and inclusion in hiring and retention
- ✓ Support talent management with detailed workforce breakdowns
- ✓ Benchmark performance and education for better training and hiring
- ✓ Enable geographic workforce planning by state and city
- ✓ Monitor and improve employee tenure and lifecycle
- ✓ Deliver concise HR dashboards for leadership reporting

BUILD DATA SOURCE AND CALCULATED FIELDS

- Imported dataset (csv) into Tableau
- Created calculated Fields & Hierarchy:
 - Total & Percentage values for Hired, Active, Terminated employees
 - Location to distinguish between HQ and branch
 - Length of Hire to identify the employee duration
 - Rank field based on total hired to utilize in various charts
 - Employee status based on hire & term dates
 - Age groups to utilize in heat maps
 - Hierarchy for Department – Job Title & Location: State - City

BUILD DYNAMIC CHARTS & INTERACTIVE VISUALS

1. Overview Visual

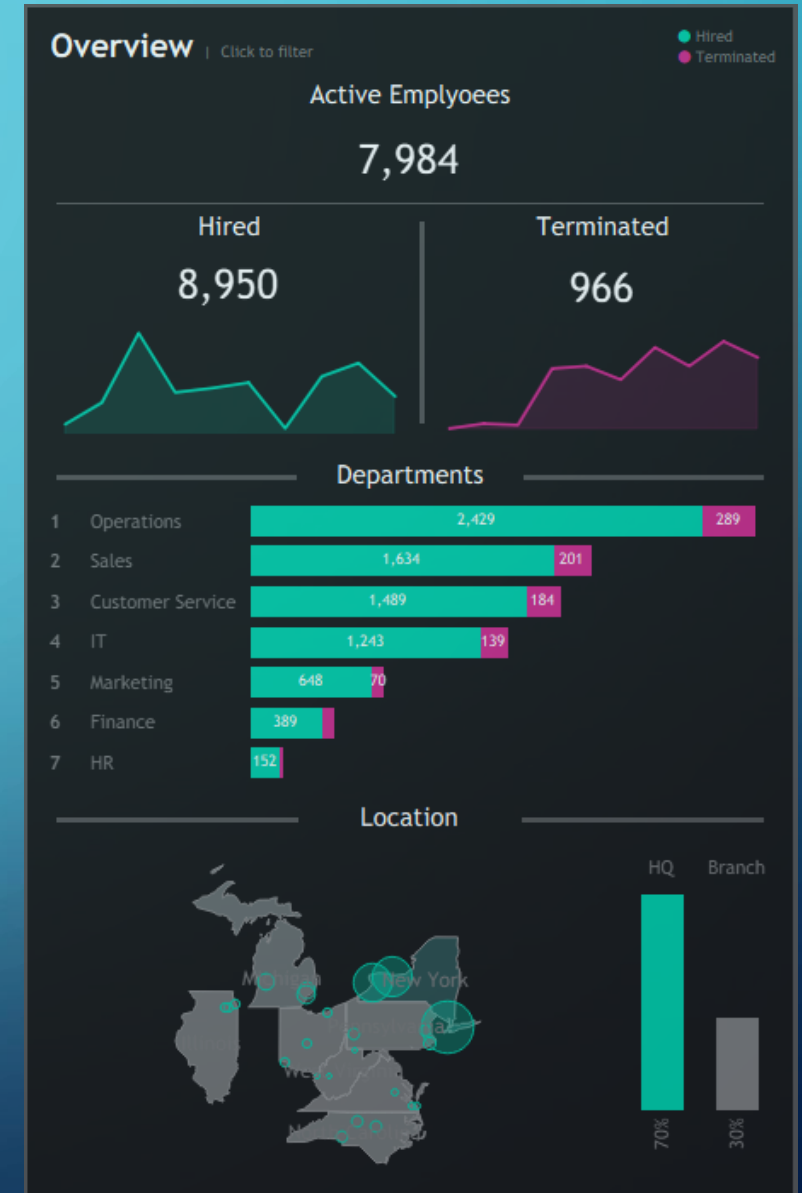
- **Active Employees, Hired, Terminated:** Key metrics displayed as summary cards
- **Departments:** Bar chart showing total hired and terminated employees by department (e.g., Operations, Sales, Customer Service, IT, Marketing, Finance, HR)
- **Location:** Pie or bar chart showing employee distribution between HQ and Branch
- **Demographics:** Pie chart for gender distribution (Male/Female)

2. Department Analysis Visual

- **Department Breakdown:** Bar chart showing hires and terminations by department
- **Job Titles:** Bar chart showing total hires by job title, with color coding for top roles
- **Departmental Trends:** Trends of hires and terminations by department over time

3. Location Analysis Visual

- **State Map:** Map visual showing total hires by state, color-coded for volume
- **City Breakdown:** Bar chart for hires by city
- **Location Split:** Column chart showing percentage of employees at HQ vs Branch



4. Demographics Visual

- **Gender Distribution:** Pie/bar chart for gender split
- **Age Groups:** Bar chart for hires by age group
- **Education Levels:** Bar chart for hires by education level

5. Education & Age Visual

- **Matrix/Heatmap:** Cross-tab showing hires by education level vs age group, with color and size indicating volume
- **Highlight Max:** Color highlights the highest group

6. Education & Performance Visual

- **Matrix/Heatmap:** Cross-tab showing % of hires by education level vs. performance rating
- **Bubble Size:** Indicates % of total hires

7. Income Visual

- **Education & Gender:** Bar chart showing average salary by education level and gender.
- **Salary by Education:** Line or bar chart showing average salary for each education level

8. Age & Salary Visual

- **Scatter Chart:** Average salary plotted against age, with job titles labeled
- **Salary Trends:** Line chart showing salary progression by age



10.Employee Detailed list Visual

- **Table:** Employee-level data including ID, Name, Age, Education, Role, Department, Location, Salary, Status, Length of Employment, Hire /Termination Years
- **Filters:** Arrows for filtering by each column

Employee ID	Full Name	Gender	Age Groups	Education Level	Job Title	Department	Location	State	City	Salary	Status	Year of Termdate
	(All) ▾	<input checked="" type="checkbox"/> Female <input checked="" type="checkbox"/> Male	(All) ▾	(All) ▾	(All) ▾	(All) ▾	<input checked="" type="checkbox"/> Branch <input checked="" type="checkbox"/> HQ	(All) ▾	(All) ▾	\$51,835 \$149,377	(All) ▾	(All) ▾
00-10001272	 Samuel Burgess 50 Bachelor				Customer Service Help Desk Technician		 Huntington West Virginia			\$66,787	 Hired 10/30/2018 -	7 years
00-10006914	 Ethan Case 45 H-Sch				Operations Inventory Specialist		 Detroit Michigan			\$63,874	 Hired 10/12/2022 -	3 years
00-10008169	 Barbara Blair 66 Bachelor				Operations Operations Analyst		 Warren Michigan			\$88,579	 Hired 11/23/2022 -	3 years
00-10012470	 Amy Davidson 36 Bachelor				Finance Accountant		 Grand Rapids Michigan			\$62,543	 Hired 10/15/2019 -	6 years
00-10017850	 Ricky Serrano 25 Bachelor				Sales Sales Specialist		 New York City New York			\$92,123	 Hired 10/7/2016 -	9 years
00-10033114	 Kathryn Scott 24 Bachelor				Operations Logistics Coordinator		 New York City New York			\$64,807	 Hired 9/12/2017 -	8 years
00-10047461	 Steven Armstrong 33 Bachelor				Finance Accountant		 Naperville Illinois			\$70,778	 Hired 8/8/2016 -	9 years
00-10076576	 Erica Kelly 26 Bachelor				Operations Inventory Specialist		 Buffalo New York			\$63,824	 Hired 1/3/2020 -	5 years
00-10076959	 Mark Stewart 62 Bachelor				Marketing Marketing Coordinator		 Buffalo New York			\$76,850	 Hired 3/31/2017 -	8 years
00-10080009	 Gabrielle Crane 48 Bachelor				Sales Sales Representative		 Buffalo New York			\$59,328	 Hired 1/9/2023 -	2 years
00-10113173	 Carol Smith 38 H-Sch				Marketing Content Creator		 Detroit Michigan			\$60,340	 Hired 7/22/2022 -	3 years
00-10113880	 Brad Hobbs 39 H-Sch				Marketing Content Creator		 Buffalo New York			\$54,733	 Hired 3/21/2017 -	8 years
00-10122731	 Travis Aguirre 56 Master				Operations Operations Analyst		 Cleveland Ohio			\$79,145	 Hired 2/22/2016 -	9 years

DASHBOARD DESIGNING

1. Design Dashboard Layout

- Plan container layout
- Create container structure to group the visuals

2. Add Visuals and charts

- Overview: KPI cards for headcount, hires, terminations
- Location: Maps or bar charts for state/city distribution
- Education & Age: Matrix or heatmap
- Income: Salary by education/gender
- Details: Employee-level table
- Departments: Bar/column charts for department-wise analysis
- Demographics: Pie/bar charts for gender, age, education
- Education & Performance: Matrix or bubble chart
- Age & Salary: Scatter or line chart

3. Enable Interactivity

- Add filters for department, location, gender, year, etc
- Make visuals clickable for drill-down

4. Apply consistent formatting

- Use consistent colors, fonts, and labels
- Add legends, axis titles, and tooltips for clarity

KEY ANALYTICAL INSIGHTS

- ✓ **Workforce Trends:** The organization maintains a stable headcount, with clear visibility into hiring and termination trends over time. Seasonal and annual patterns in hiring and attrition are evident, enabling proactive workforce planning.
- ✓ **Departmental Analysis:** Operations and Sales are the largest departments, with the highest hiring and termination rates. Certain departments show higher turnover, signaling potential retention challenges or rapid scaling.
- ✓ **Geographic Distribution:** Most employees are concentrated at HQ, with significant representation in key states and cities. This geographic insight supports targeted resource allocation and branch optimization.
- ✓ **Demographic & Diversity Insights:** The workforce is predominantly male, with opportunities to improve gender diversity. Age group analysis shows a healthy mix.
- ✓ **Education & Performance:** Most employees hold a Bachelor's degree, with a positive correlation between higher education and performance ratings. However, some high-performing employees come from diverse educational backgrounds.
- ✓ **Compensation & Tenure:** Salary analysis reveals that higher education and experience generally lead to higher compensation. Tenure data highlights departments and roles with strong retention, as well as areas with frequent turnover.

RECOMMENDATIONS

- ✓ **Enhance Retention in High-Turnover Departments:** Conduct exit interviews and engagement surveys in departments with high attrition. Implement targeted retention programs and career development initiatives.
- ✓ **Promote Diversity and Inclusion:** Set measurable goals to increase gender and age diversity, especially in leadership and technical roles.
- ✓ **Optimize Geographic Staffing:** Reallocate resources to branches or regions with staffing gaps or high growth potential. Consider remote or hybrid work options to tap into broader talent pools.
- ✓ **Leverage Education & Performance Data:** Use insights on education and performance to refine hiring criteria and training programs. Recognize and reward high performers from all educational backgrounds.
- ✓ **Review Compensation Structures:** Ensure pay equity across roles, departments, and demographics. Benchmark salaries regularly to remain competitive and retain top talent.
- ✓ **Monitor and Report Progress:** Use the dashboard for ongoing monitoring and to inform strategic HR decisions. Share key metrics and progress with leadership and stakeholders regularly.