

Data Preparation:

1. Data Source:

The dataset was generated using the Python library faker (code provided by ChatGPT). The generated data was cleaned, and no null values were present.

2. Hierarchies:

I created a hierarchy that organizes:

- **Department and job title**
- **State and City**

3. Calculated Measures:

- **Status Measure:** Indicates whether the employee is currently employed or has been terminated.
- **Active Measure:** Identifies current employees still working at the company.
- **Age Measure:** Calculates the employee's age (since age was not included in the original data).
- **Length of Employment:** Calculates the number of years the employee has been employed.
- **Terminated Employees Measure:** Tracks the total number of employees who have been terminated.
- **Total Hired Employees Measure:** Tracks the total number of employees hired.
- **Percentage of Total Hired Employees:** Calculates the percentage of the total number of hired employees relative to the company's workforce.
- **Location Measure:** Identifies whether an employee is hired at the headquarters (HQ) in New York or at a branch location.
- **Age Group Measure:** Categorizes employees into predefined age groups for aggregation.

Creating Visualizations:

1. Overview Section:

- Visualizes key metrics, including:
 - Current **Active Employees**.

- **Total Hired Employees and Terminated Employees.**

- Displays **Active vs. Terminated Employees by Department.**
- A **Location Section** showing employees hired by city, state, and whether they are located at the HQ or a branch.

2. **Demographics Section:**

- **Pie Chart:** Shows the distribution of hired and terminated employees by gender.
- **Bar Chart:** Displays the total number of hires by education level.
- **Heat Map:** Depicts the relationship between age groups, education level, and total hired employees, enhanced with the percentage measure.
- **Bar Chart:** Displays the total hires by age group.
- **Heat Map:** Visualizes employee performance across different education levels.

3. **Income Section:**

- **Barbell Chart:** Displays the average salary for each gender based on education level.
- **Scatter Plot:** Shows the distribution of salary and age, with positions plotted based on two measures (salary and age).

4. **Details Dashboard:**

- A detailed view that displays all hired employees, including their ID, demographics, roles, location, salary, employment status, and length of employment.