📊 HR Dashboard Case Study:

Empowering Data-Driven HR Decisions

✳️ Project Background

As part of a data analytics initiative, developed a comprehensive **HR Dashboard** to help Human Resource managers visualize and analyse workforce metrics effectively. The goal was to deliver both **high-level summaries** and **detailed employee insights** to support strategic planning and operational decisions.

🏢 Business Problem

The HR department lacked a unified system for tracking and analysing workforce metrics. Decision-making was slow and reactive due to fragmented data, manual reporting processes, and the absence of visual tools to understand employee trends. This made it difficult to:

- Monitor employee growth or attrition over the years
- Identify underperforming departments or regions
- Detect salary disparities across demographics
- Strategically plan hiring, retention, and compensation

To address this, the business required a **dynamic HR Dashboard** that could present **both high-level overviews and detailed employee-level insights**, helping them uncover patterns and make informed decisions backed by historical and real-time data.

📊 Analysis

The HR Dashboard was built using a simulated dataset of employees, with fields such as:

- Personal: Gender, Age, Birthdate, Education, City, State
- Job-related: Department, Job Title, Hire/Termination Date, Salary, Performance
- Timeline: Hiring year, Termination year, Employment status
- Derived Metrics: Adjusted salary, age at hire, performance vs. education

The dashboard was divided into four core sections:

1. **Overview** – Metrics on total hires, active/terminated employees, distribution by departments, locations, and HQ vs. branches

2. **Demographics** – Gender ratio, age & education breakdowns, and performance-to-education analysis

3. **Income Analysis** – Salary comparisons by gender, education, department, and age

4. **Employee Records View** – A searchable/filterable table of employee details for granular review

💡 **Business Insights (with numbers)**

1. 📈 **Hiring Trends**:
   - ➢ A steady increase in hiring was observed from 2015 to 2024
   - ➢ **Peak hiring year**: **2017** with **1,560** employees hired **(17%** of total hired emp**)**
   - ➢ **Termination year**: 2018 with **174** employees terminated (**18%** of total terminated)

2. 👥 **Gender Distribution**:
   - ➢ Male: **54%**, Female: **46%**
   - ➢ Salary gap of **6.8%** favouring male employees on average

3. 📍 **Employee Distribution**:
   - ➢ **HQ (New York)** hosts **70%** of employees
   - ➢ Remaining **30%** are spread across branch locations in 9 other cities

4. 🎓 **Education & Performance**:
   - ➢ **48%** of employees with **PhD** had "Excellent" performance ratings compare to other education level.
   - ➢ **50%** of employees with **Backhlore** had "Good" performance ratings compare to other education level.
   - ➢ Those with only **high school** education had a **34% higher chance** of receiving "Needs Improvement"

5. 💵 **Salary Analysis**:
   - ➢ Employees aged **45–54** earned **18% higher average salaries** than those aged 25–34
   - ➢ Departments like **IT** , **finance** showed the **highest average salary** levels

✅ **Actions Taken**

1. **Restructured Hiring Strategy**
   - o Increased hiring in underrepresented cities after analysing location distribution
   - o Balanced hiring timeline to avoid budget overload in peak years

2. **Launched Diversity Pay Review**
   - o Initiated a gender pay equity audit
   - o Adjusted salaries where unjustified gaps were identified

3. **Introduced Targeted Training**

   o Performance improvement programs created for employees with lower education-performance alignment

   o Learning paths and mentorship introduced for departments with high turnover

4. **Location Optimization**

   o Branches with low employee counts were merged or integrated to reduce operational overhead

   o Relocation benefits were reviewed to shift headcount more strategically