

## Title: Data Visualization for Human Resources

### Problem Statement:

In today's competitive business landscape, organizations face the challenge of optimizing their human resources to drive growth and success. They struggle with understanding their workforce demographics, employee performance, satisfaction, and compensation structures. There's a critical need for a solution that can efficiently collect, analyze, and visualize HR data to make informed decisions, enhance employee engagement, and ensure fair compensation practices.

### Solution:

Our solution is an HR Analytics system that provides a comprehensive dashboard with real-time insights into employee data. It includes:

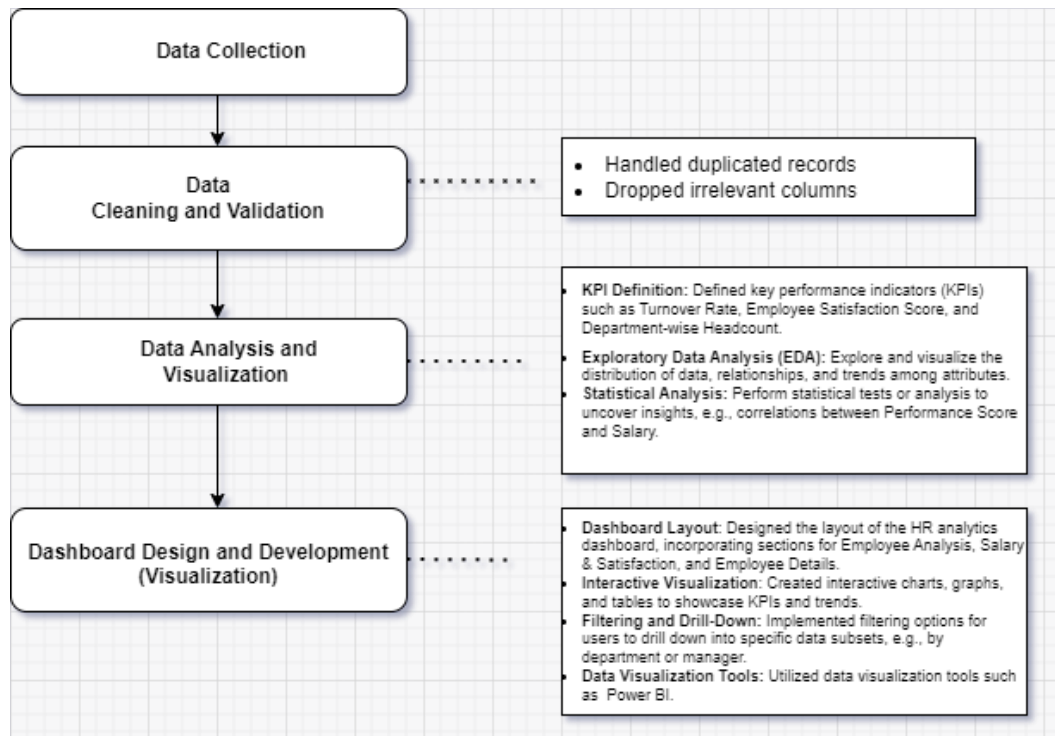
- **Demographic Analysis:** A breakdown of the workforce by gender, marital status, and citizenship.
- **Performance Tracking:** Evaluation of employee performance, identifying trends, and pinpointing high and low performers.
- **Employment Status Monitoring:** Real-time tracking of employment status (active/terminated) to address turnover rates.
- **Departmental Insights:** Data-driven decision-making through department-wise analytics.
- **Managerial Effectiveness:** Assessment of managerial performance and its impact on team dynamics.
- **Compensation Transparency:** Equitable compensation practices through sum and average salary data.
- **Employee Satisfaction:** Continuous monitoring of employee feedback and engagement.
- **Individual Employee Details:** Structured employee profiles for streamlined HR management.

### DATASET: HR Analytics

- **Employee Analysis:** Gender, Marital Status, Citizenship, Employment Status, Performance Score, Department, Manager Name.
- **Salary & Satisfaction:** Total Feedback, Average Rating, Average Engagement Rating, Sum and Average Salary by Department, Position, and Manager Name.
- **Employee Details:** Employee Name, Date of Hire, Department, Employment Status, Manager Name, Position, Salary.

| Employee_Name         | Salary | Position                 | DOB       | Sex | MaritalDesc | CitizenDesc | RaceDesc                  | DateofHire | DateofTermination | ... | EmploymentStatus       | Department |
|-----------------------|--------|--------------------------|-----------|-----|-------------|-------------|---------------------------|------------|-------------------|-----|------------------------|------------|
| Ait Sidi, Karthikeyan | 104437 | Sr. DBA                  | 5/5/1975  | M   | Married     | US Citizen  | White                     | 3/30/2015  | 6/16/2016         | ... | Voluntarily Terminated | IT/IS      |
| Akinkuolie, Sarah     | 64955  | Production Technician II | 9/19/1988 | F   | Married     | US Citizen  | White                     | 7/5/2011   | 9/24/2012         | ... | Voluntarily Terminated | Production |
| Anderson, Carol       | 50825  | Production Technician I  | 9/8/1989  | F   | Divorced    | US Citizen  | White                     | 7/11/2011  | 9/6/2016          | ... | Voluntarily Terminated | Production |
| Baczinski, Rachael    | 54670  | Production Technician I  | 1/12/1974 | F   | Married     | US Citizen  | Black or African American | 1/10/2011  | 1/12/2017         | ... | Voluntarily Terminated | Production |
| Barbara, Thomas       | 47211  | Production Technician I  | 2/21/1974 | M   | Married     | US Citizen  | Black or African American | 4/2/2012   | 9/19/2016         | ... | Voluntarily Terminated | Production |

| it | ManagerName    | RecruitmentSource  | PerformanceScore | EngagementSurvey | EmpSatisfaction | SpecialProjectsCount | LastPerformanceReview_Date | Absences |
|----|----------------|--------------------|------------------|------------------|-----------------|----------------------|----------------------------|----------|
| S  | Simon Roup     | Indeed             | Fully Meets      | 4.96             | 3               | 6                    | 2/24/2016                  | 17       |
| n  | Kissy Sullivan | LinkedIn           | Fully Meets      | 3.02             | 3               | 0                    | 5/15/2012                  | 3        |
| n  | Webster Butler | Google Search      | Fully Meets      | 5.00             | 4               | 0                    | 2/1/2016                   | 2        |
| n  | David Stanley  | Diversity Job Fair | Fully Meets      | 4.20             | 4               | 0                    | 1/30/2016                  | 12       |
| n  | Kissy Sullivan | Diversity Job Fair | Fully Meets      | 4.20             | 3               | 0                    | 5/6/2016                   | 15       |

**WORKFLOW:**

### INSIGHTS:

#### • What's the breakdown of our workforce by job title?

- Nearly half of our company consists of 'Production Technician I's,' followed by 17% 'Production Technician 2's, and 9% 'Area Sales Managers.'

#### • Why do employees tend to leave?

- The main reasons employees leave are to pursue other opportunities, dissatisfaction, and seeking higher compensation.
- Notably, the Production department experiences a relatively high turnover rate.

#### • Do certain managers have a greater impact on employee turnover?

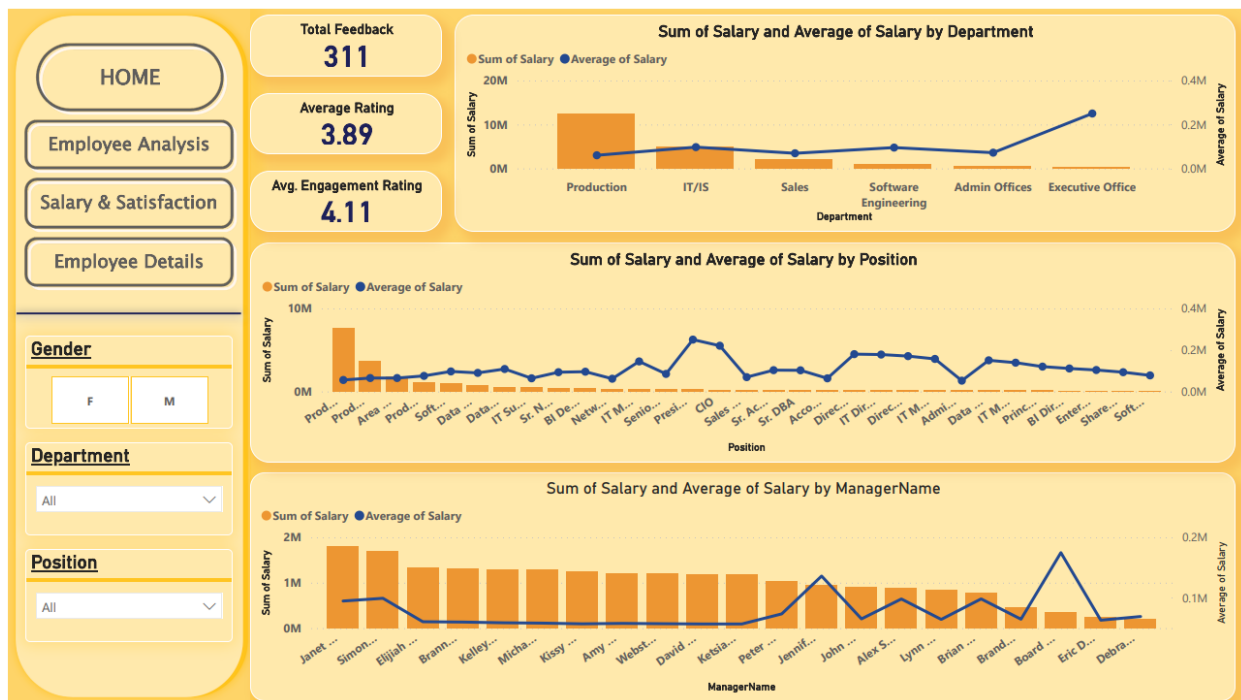
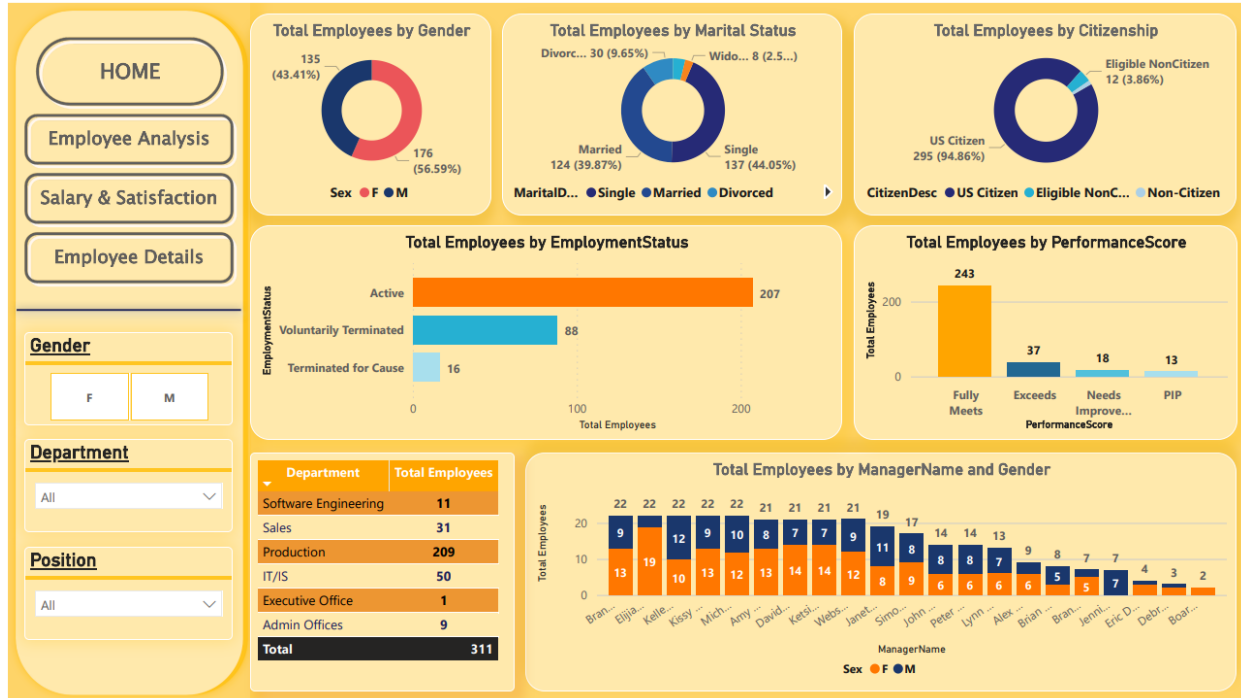
- Managers like D. Houlihan, W. Butler, and A. Dunn appear to have a concerning impact on employee turnover. Typically, this would warrant further investigation.

#### • Which job roles experience the highest turnover rates?

- Job roles such as data architects, production technicians, CIOs, BI developers, and DB admins face notably high turnover rates.

### DASHBOARD:





HOME

Employee Analysis

Salary & Satisfaction

Employee Details

Gender

F

M

Department

All

Position

All

| Employee_Name         | Earliest DateofHire | First Department     | First EmploymentStatus | First ManagerName | First Position           | Sum of Salary |
|-----------------------|---------------------|----------------------|------------------------|-------------------|--------------------------|---------------|
| Adinolfi, Wilson K.   | 05 July 2011        | Production           | Active                 | Michael Albert    | Production Technician I  | 62506         |
| Ait Sidi, Karthikeyan | 30 March 2015       | IT/IS                | Voluntarily Terminated | Simon Roup        | Sr. DBA                  | 104437        |
| Akinkuolie, Sarah     | 05 July 2011        | Production           | Voluntarily Terminated | Kissy Sullivan    | Production Technician II | 64955         |
| Alagbe,Trina          | 07 January 2008     | Production           | Active                 | Elijah Gray       | Production Technician I  | 64991         |
| Anderson, Carol       | 11 July 2011        | Production           | Voluntarily Terminated | Webster Butler    | Production Technician I  | 50825         |
| Anderson, Linda       | 09 January 2012     | Production           | Active                 | Amy Dunn          | Production Technician I  | 57568         |
| Andreola, Colby       | 10 November 2014    | Software Engineering | Active                 | Alex Sweetwater   | Software Engineer        | 95660         |
| Athwal, Sam           | 30 September 2013   | Production           | Active                 | Ketsia Liebig     | Production Technician I  | 59365         |
| Bachiochi, Linda      | 06 July 2009        | Production           | Active                 | Brannon Miller    | Production Technician I  | 47837         |
| Bacong, Alejandro     | 05 January 2015     | IT/IS                | Active                 | Peter Monroe      | IT Support               | 50178         |
| Baczinski, Rachael    | 10 January 2011     | Production           | Voluntarily Terminated | David Stanley     | Production Technician I  | 54670         |
| Barbara, Thomas       | 02 April 2012       | Production           | Voluntarily Terminated | Kissy Sullivan    | Production Technician I  | 47211         |
| Barbossa, Hector      | 10 November 2014    | IT/IS                | Active                 | Simon Roup        | Data Analyst             | 92328         |
| Barone, Francesco A   | 20 February 2012    | Production           | Active                 | Kelley Spirea     | Production Technician I  | 58709         |
| Barton, Nader         | 24 September 2012   | Production           | Voluntarily Terminated | Michael Albert    | Production Technician I  | 52505         |
| Bates, Norman         | 21 February 2011    | Production           | Terminated for Cause   | Kelley Spirea     | Production Technician I  | 57834         |
| Beak, Kimberly        | 21 July 2016        | Production           | Active                 | Kelley Spirea     | Production Technician II | 70131         |
| Beatrice, Courtney    | 04 April 2011       | Production           | Active                 | Elijah Gray       | Production Technician I  | 59026         |
| Becker, Renee         | 07 July 2014        | IT/IS                | Terminated for Cause   | Simon Roup        | Database Administrator   | 110000        |
| Becker, Scott         | 08 July 2013        | Production           | Active                 | Webster Butler    | Production Technician I  | 53250         |
| Bernstein, Sean       | 02 April 2012       | Production           | Active                 | Amy Dunn          | Production Technician I  | 51044         |
| Biden, Lowan M        | 19 August 2013      | Production           | Active                 | Ketsia Liebig     | Production Technician I  | 64919         |
| Billis, Helen         | 07 July 2014        | Production           | Active                 | Brannon Miller    | Production Technician I  | 62910         |
| Blount, Dianna        | 04 April 2011       | Production           | Active                 | Michael Albert    | Production Technician II | 66441         |
| Bondwell, Betsy       | 10 January 2011     | Production           | Voluntarily Terminated | Elijah Gray       | Production Technician II | 57815         |
| Total                 | 09 January 2006     | Admin Offices        | Active                 | Alex Sweetwater   | Accountant I             | 21465433      |