HR Analytica: System Documentation

This document provides a comprehensive guide to understanding the data structure, calculations, and visualizations within the HR Analytica Dashboard.

1. Data Source (Excel Template)

The system is powered by a standard Excel `.xlsx` file. The intelligence engine automatically parses, groups, and analyzes the data based on specific formatting rules.

Structure Rules

- **Tabs (Sheets):** Each Excel sheet represents one month.
- **Naming:** Sheet names must contain a date (e.g., `Jan 2024`, `Oct-23`). The system sorts them chronologically.
- **Columns:** Standardized headers are required for accurate analysis.

Required Columns

Column Name	Usage
Employee ID	**Unique Identifier**. Triggers Joiner/Exit detection.
Basic Salary	Used to calculate **Salary Growth** (increments) and Stagnation.
Total Salary	Primary metric for **Total Cost** analysis.
Department	Grouping for Department Spend and Risk Analysis.
Bonus	Populates the Bonus Distribution chart.
Taxes	Used in the Cost Overview breakdown.
Leave Taken	Days of leave. Used to calculate **Risk Scores**.

2. Logic & Calculations

The dashboard processes data in real-time. Below is the logic governing each metric.

KPI Cards

- **Total Payroll Cost**: Sum of `Total Salary` for all records in the selected timeframe.

    - *Trend:* Compares current total vs. previous period. Red indicates cost increase.

- **Latest Headcount**: Count of employees with `Status: Active` in the most recent selected month.

    - *Trend:* Growth vs. previous month. Green indicates growth.

- **New Joiners**:

    - *Logic:* An employee is a "Joiner" if their `Employee ID` appears in the current month but was **absent** in the immediate prior month.

- **Attrition (Exits)**:

    - *Logic:* An employee is an "Exit" if their `Employee ID` existed in the prior month but is **absent** in the current month.

- **Salary Growth**:

    - *Logic:* Count of employees where `Current Basic Salary > Previous Basic Salary`.

3. Visualizations

Cost Overview (Chart)

A line chart visualization of financial trends. Includes a dropdown to filter view modes:

- **Full Overview**: Shows all cost lines.
- **Total CTC**: Cost to Company (Total Salary + Employer PF).
- **Basic Salary**: Base pay trends only.
- **Taxes**: Tax deduction trends.

Department Spend (Pie)

A proportional breakdown of where the money is going by Department.

AI Workforce Diagnostics

The system runs algorithms to identify anomalies:

- **Stagnant Pay**: Employees who have not received a `Basic Salary` increase for 12+ months.
- **Risk Departments**: Depts where average leave > threshold (e.g. 2 days/month).
- **Top Earners**: Employees with the highest cumulative `Total Salary`.
- **Leave Outliers**: Individuals with excessive leave relative to the period.

Generated by HR Analytica System