

Domain Knowledge Document

HR Attrition & Workforce Analytics

1. Business Context

Human Resource Analytics focuses on using workforce data to understand employee behavior, organizational health, and factors influencing retention and attrition. This project is centered on analyzing employee attrition patterns to support HR leadership in identifying workforce risks, improving employee engagement, and designing effective retention strategies.

2. Domain Focus

The primary domain of this solution is workforce and attrition analytics. The dataset captures employee demographics, job roles, compensation, satisfaction indicators, and tenure attributes, enabling analysis of why employees leave and which segments are most affected.

3. Data Model Overview

The solution follows a star schema design with one central fact table and supporting dimension tables. The HR_Data table serves as the fact table containing employee-level records, while Departments, Jobs, and Education tables provide descriptive business context.

4. Table-Level Purpose

HR_Data: Stores employee attributes including age, gender, salary, tenure, job details, satisfaction scores, and attrition status. This table drives all KPIs and analytical measures.

Departments: Provides department classifications to analyze workforce distribution and attrition at organizational-unit level.

Jobs: Defines job roles used to evaluate role-based attrition, satisfaction issues, and workforce planning needs.

Education: Defines education levels to assess how educational background relates to attrition and compensation patterns.

5. Analytical Use Cases

- Overall workforce and attrition monitoring
- Identification of high-risk employee segments
- Role and department-level attrition diagnostics
- Compensation and tenure impact analysis
- Satisfaction and engagement evaluation
- Support for retention and workforce planning discussions

6. Business Value

This domain framework enables HR and leadership teams to move from reactive reporting to proactive workforce analysis. It supports evidence-based decisions related to employee retention, compensation strategy, role design, and organizational development.