EMPLOYEE SATISFACTION AND ATTRITION RISK ANALYSIS IN A MID-SIZED IT FIRM

1. Background and Problem Statement:

A mid-sized IT services firm with 850 employees across three offices observed an unexpected rise in voluntary attrition over the past 12 months, particularly among junior developers and support staff. HR feedback mechanisms existed but were largely qualitative and unstructured. The leadership team commissioned a structured **data-driven attrition risk analysis** to quantify satisfaction levels and identify actionable drivers of employee turnover.

2. Objectives:

- Measure the relationship between employee satisfaction and likelihood of attrition
- Build a model to predict future attrition risk based on current engagement indicators
- Identify high-risk segments and their characteristics
- Provide recommendations for HR to design targeted retention strategies

3. Methodology:

3.1 Data Sources

- **HRMS data:** Employee records, attrition logs, tenure, role, and department
- **Internal survey:** 28-item satisfaction questionnaire (Likert scale) completed by 623 employees
- **Support data:** Exit interviews, support ticket data (e.g., HR queries, complaints)

3.2 Data Cleaning and Transformation

- Merged HRMS and survey datasets using employee ID
- Created composite satisfaction index (scale: 0–100) from key items like:
    - Role clarity
    - Manager communication
    - Work-life balance
    - Growth perception

- Encoded categorical variables and normalized continuous ones in R

3.3 Analytical Approach

- **Descriptive statistics** to assess satisfaction by department, tenure, and gender
- **Logistic regression** to predict attrition likelihood (binary: left vs. stayed)
- **Chi-square tests** for significance between categorical variables and attrition
- **Correlation matrix** to identify multicollinearity among satisfaction factors

4. Results:

4.1 Satisfaction Levels by Department

Department	Avg. Satisfaction (0–100)	Attrition Rate
Development	73.2	14.8%
Support	61.5	26.4%
HR & Admin	75.4	9.2%
QA	68.1	12.3%

- Support staff showed the **lowest satisfaction and highest attrition**
- Common dissatisfaction drivers: poor manager feedback, shift scheduling issues

4.2 Logistic Regression Results

Predictor	Odds Ratio	Significance
Satisfaction Index	0.89	$p < 0.001$
Tenure (months)	0.97	$p = 0.003$
Complaints in last 6 months	1.56	$p < 0.01$
Role clarity (scale 1–5)	0.73	$p < 0.01$

- Each 10-point drop in satisfaction score increased attrition odds by ~1.6x
- Role ambiguity strongly predicted intent to quit
- Employees with at least one HR complaint were 56% more likely to leave

5. Recommendations:

5.1 Support Function Interventions

- Assign dedicated managers to small support teams for better communication
- Introduce self-scheduling options for shifts where operationally feasible
- Add quarterly one-on-one check-ins with HR for support roles

5.2 Company-wide Engagement Strategies

- Replace static yearly reviews with continuous feedback via lightweight surveys
- Provide visibility into promotion pathways with role-based competency maps
- Launch manager coaching sessions to address low feedback quality

5.3 Attrition Risk Monitoring Dashboard

- Build an **attrition risk tracker** using the regression model and live HRMS feed
- Flag high-risk employees (>70% predicted churn) for proactive intervention
- Include risk scores in monthly HRBP review meetings

6. Outcomes

- HR expects 18% reduction in voluntary exits from the support team within 6 months
- Forecasted improvement of 9.3 points in support function's average satisfaction score
- Company-wide attrition reduction target set at 4.5% over one year

7. Stakeholder Relevance:

Academic:

- Demonstrates use of logistic regression and satisfaction indexing in HR analytics
- Suitable for case studies in organizational psychology, workforce analytics, and data-informed HRM

Corporate:

- Enables HR leaders to move from anecdotal to **evidence-based retention strategies**
- Supports predictive talent management and better employee experience planning
- Aligns employee feedback with proactive managerial and policy responses