Employee Attrition Prevention Strategy

1. Executive Summary

Employee attrition negatively impacts organizational productivity, costs, and morale. Based on exploratory data analysis, machine learning modeling, and dashboard insights, key attrition drivers were identified and prevention strategies are proposed.

2. Key Attrition Drivers Identified

From Exploratory Data Analysis (EDA), Machine Learning results, and Power BI insights, the following factors were found to strongly influence attrition:

- Excessive OverTime.
- Low Job Satisfaction.
- Poor Work-Life Balance.
- Lower Monthly Income.
- Long Promotion Gaps.
- High Distance From Home.
- Higher attrition among younger employees.
- Specific departments and job roles.

3. Attrition Prevention Strategies

Improve Work-Life Balance

Introduce flexible working hours, hybrid work models, and ensure balanced workloads.

Overtime Management

Monitor overtime, hire additional staff, and compensate overtime fairly.

Salary & Compensation Review

Review salary structures, provide incentives, and ensure timely salary revisions.

Career Growth & Promotions

Reduce promotion gaps, ensure transparent promotion policies, and support internal mobility.

Enhance Job Satisfaction

Improve leadership communication, recognize performance, and collect regular feedback.

Targeted Retention Plans

Design department-specific retention strategies for high-risk roles.

Commute & Location Support

Offer remote work options, relocation assistance, and flexible shift timings.

Data-Driven HR Decisions

Use predictive analytics to identify high-risk employees and act proactively.

4. Role of Predictive Analytics

The Logistic Regression model achieved approximately 88% accuracy, enabling HR teams to:

- Identify employees at high risk of leaving.
- Take early preventive actions.

5.Model Insight

A Logistic Regression model achieved approximately 88% accuracy, indicating strong predictive capability for identifying at-risk employees.

6.Conclusion

By addressing workload, compensation, career growth, and employee well-being, organizations can significantly reduce attrition.
Combining data analytics, machine learning, and Power BI dashboards allows HR teams to move from reactive to proactive attrition management.

7.Tools & Technologies Used

- Python (Pandas, Seaborn, Scikit-learn)
- Logistic Regression Model
- Power BI
- Data Visualization & Predictive Analytics