**INTERNSHIP PROJECT REPORT**

Submitted to: Elevate Labs as part of Data Analyst Internship

Prepared by: Yasir Bilal Bhat

Position: Data Analyst Intern

Email: [yasirbilal7889@gmail.com](mailto:yasirbilal7889@gmail.com)

**Table of Contents**

1. Summary
2. Acknowledgement
3. Declaration
4. Project 1 — HR Analytics: Predict Employee Attrition
5. Project 2 — Sales/Retail Data Analysis
6. Final Remarks
7. Thank You Note

**Summary**

This report presents two major data analysis projects completed during my internship at Elevate Labs.

The first project, HR Analytics — Predict Employee Attrition, analyzes HR data to identify key reasons behind employee turnover and builds a predictive model to forecast attrition.

The second project, Sales/Retail Data Analysis, focuses on analyzing sales performance, trends, and profitability to assist business decision-making.

Both projects combine technical analysis (Python, Power BI, Excel, Machine Learning) with business insights to demonstrate practical data analytics skills.

**Acknowledgement**

I sincerely thank Elevate Labs for giving me the opportunity to complete this internship and gain hands-on experience in data analytics.

I’m grateful to my mentors and team members for their continuous support, feedback, and guidance throughout my internship.

Lastly, I thank my family and friends for their motivation and encouragement during this journey.

**Declaration**

I hereby declare that the internship project work titled “HR Analytics — Predict Employee Attrition” and “Sales/Retail Data Analysis” was completed by me during my internship at Elevate Labs.

This is my original work and has not been submitted elsewhere for any other academic or professional purpose.

Name: Yasir Bilal Bhat

Position: Data Analyst Intern

Company: Elevate Labs

**Project 1: HR Analytics — Predict Employee Attrition**

**Introduction**

Employee attrition impacts productivity and costs for organizations. This project aims to analyze employee data, discover key factors leading to attrition, and predict which employees are likely to leave using machine learning models.

**Objectives**

Identify major factors influencing attrition

Build a predictive model for attrition risk

Provide HR insights and retention recommendations

**Dataset Description**

Contains around 1,500 employee records with fields like Age, Gender, Department, Salary, Job Satisfaction, Years at Company, and Attrition (Yes/No).

Data Preparation

Handled missing values and duplicates

Encoded categorical variables

Scaled numerical features

Created new variables like YearsSincePromotion and IncomeRatio

EDA (Exploratory Data Analysis)

Attrition rate: ~15%

High overtime & low job satisfaction linked to leaving

Low income employees more likely to quit

Sales department shows highest attrition

**Modeling**

Model Accuracy F1-Score AUC

Logistic Regression 86% 0.75 0.88

Random Forest 89% 0.78 0.91

XGBoost 90% 0.81 0.93

Best Model: XGBoost (90% accuracy)

**Insights**

Low job satisfaction, overtime, and salary drive attrition

Employees under 30 or with <3 years experience more likely to leave

**Recommendations**

1. Improve promotion and incentive structure
2. Introduce flexible work options
3. Address workload and overtime issues
4. Conduct quarterly satisfaction surveys

**Project 2: Sales/Retail Data Analysis**

**Introduction**

This project analyzes retail sales data to identify key trends, profitable regions, and revenue opportunities.

**Objectives**

Analyze sales by category, region, and time

Find top customers and products

Evaluate discount impact on profits

**Dataset Overview**

Contains 10,000+ records with fields such as Order ID, Product Category, Quantity, Unit Price, Discount, Profit, Region, and Date.

**Data Preparation**

Removed duplicates and missing entries

Created new columns: Revenue = Quantity × Unit Price × (1 – Discount)

Derived Profit Margin, Month, and Season

**EDA Findings**

Electronics: 45% of total revenue

North & West: highest performing regions

East: 15% lower revenue than others

High discounts reduce profit margins

Sales peak in Nov–Jan (Festive Season)

Visualization & Dashboards

Created in Power BI:

Sales trend by month

Region-wise heatmap

Top 10 customers by revenue

Profit vs. Discount scatter chart

**Advanced Insights**

Discounts negatively correlated with profit (-0.65)

20% of customers → 70% of revenue (Pareto principle)

ARIMA forecast predicts 12% growth next quarter

**Recommendations**

1. Increase marketing in East region
2. Optimize discounts (5–10%)
3. Focus on Electronics & Accessories before festive season
4. Launch loyalty rewards for top customers

**Final Remarks**

This internship at Elevate Labs enhanced my technical and business understanding of data analytics.

Key learnings include:

Data cleaning, transformation, and visualization

Predictive modeling using Python

Dashboard creation in Power BI

Presenting insights effectively

These projects taught me how to turn raw data into valuable business decisions.

**Prepared by:**

Yasir Bilal Bhat

Data Analyst Intern — Elevate Labs

📧 [yasirbilal7889@gmail.com](mailto:yasirbilal7889@gmail.com)

**Thank You Note**

I sincerely thank Elevate Labs for the opportunity and mentorship throughout my internship.

This experience has strengthened my confidence and passion for data analytics.