Final Internship Project Report

Intern Name: Keerti Neeramanigar

Project Title: HR Analytics – Predict Employee Attrition

Internship Duration: July 2025 (2 weeks project phase)

Institution: Presidency University, Bengaluru

# 📌 Problem Statement

Employee attrition is a major issue for HR departments. The goal of this project is to predict employee attrition and understand the key factors contributing to it using data analytics and visualization techniques.

# 🗂 Dataset Used

- Dataset: IBM HR Analytics Employee Attrition

- Source: Kaggle

- Format: CSV

# 🛠 Tools & Technologies Used

- Python (Jupyter Notebook): For data cleaning, preprocessing & model building

- Scikit-learn: Logistic Regression model

- Power BI: For dashboard creation

- GitHub: For version control and submission

# 📊 Project Phases Summary

## 🔹 Phase 1: Data Understanding

- Loaded the dataset

- Explored key features: Age, Attrition, Department, etc.

- Understood data distribution and initial trends

## 🔹 Phase 2: Preprocessing & Model Building

- Cleaned missing/null values

- Label encoded categorical columns

- Trained Logistic Regression model to predict attrition

- Achieved model output successfully

## 🔹 Phase 3: Dashboard Creation using Power BI

- Created interactive charts:

- Count of Attrition by Age

- Count of Attrition by Department

- Count of Attrition by Gender

- Count of Attrition by Job Role

- Count of Attrition by Monthly Income

- Count of Attrition by Marital Status

## 🔹 Phase 4: GitHub Submission

- Uploaded all files with clear commit messages

- Organized project repository with Phases, CSV, Notebooks, PDF, and README

# ✨ Learnings & Conclusion

## 📚 What I Learned

- How to clean and preprocess real-world HR data

- Built ML models for classification problems

- Created attractive dashboards using Power BI

- Learned how to manage code/projects using GitHub

- Improved technical communication by documenting the process

## 🧠 Challenges Faced

- Power BI setup and navigation

- Model convergence warning handling

- Time management during multiple phases

## ✅ Final Outcome

Successfully built an end-to-end HR Analytics project predicting employee attrition, visualizing trends, and maintaining the workflow on GitHub. The internship improved my confidence in data analysis, visualization, and project documentation.