EnergiX Innovations

Understanding Factors Contributing to Employee Attrition

Plan

Objectives:
- Analyse HR data to identify factors influencing employee attrition.
- Develop descriptive statistics and visualisations for initial insights.
- Formulate hypotheses regarding potential attrition drivers.

Scope:
- Utilise HR-provided data on employee demographics, performance, employment duration, etc.
- Conduct exploratory data analysis (EDA) to uncover patterns and correlations.

Timeline:
- Phase 1 (Planning & Data Exploration): *Estimated Time: 3 Weeks*
- Phase 2 (Feature Selection & Hypothesis Formation): *Estimated Time: 2 weeks*

Analyze

Data Exploration:
- Visualise distributions, correlations, and trends using histograms, scatter plots, etc.
- Identify outliers or anomalies that may impact analysis.

Hypothesis Formation:
- Formulate hypotheses based on initial data exploration.
- Identify potential variables strongly correlated with attrition.
- Prioritise variables for feature selection and model construction.

Construct

Feature Selection:
- Apply business knowledge or expertise to extract specific features.
- Handle multicollinearity if required.

Model Development:
- Choose appropriate modelling techniques (e.g., logistic regression, decision trees).
- Develop models to predict employee attrition based on selected features.
- Validate and fine-tune models using cross-validation techniques.

Execute

Model Evaluation:
- Assess model performance using metrics (accuracy, precision, recall, ROC-AUC).
- Validate models on unseen data to check generalizability.
- Iterate and refine models based on evaluation results.

Insights & Recommendations:
- Extract insights on significant factors influencing attrition.
- Generate actionable recommendations for HR policies or interventions.
- Prepare a summary or report concluding findings and recommendations.