Customer Analytics using Business Intelligence

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Objective

The objective of this project is to analyze customer commendations and complaints data to identify service quality trends, highlight recurring issues, and provide actionable insights for business decision-making. By leveraging Python for data preprocessing and exploratory analysis and Power BI for interactive dashboards, the project aims to:

- Enhance visibility into customer experiences.
- Identify performance gaps across routes and employee roles.
- Support data-driven improvements in customer service.

Problem Statement

Organizations receive large volumes of customer feedback in the form of commendations and complaints. However, this data is often unstructured and underutilized. Without proper analysis, organizations struggle to identify trends, resolve recurring issues, or recognize employee excellence.

The challenge is to transform raw feedback data into meaningful insights that can improve service quality and customer satisfaction.

Scope

- Data preprocessing and cleaning using Python.
- Exploratory Data Analysis (EDA) to uncover trends and patterns.
- Development of interactive Power BI dashboards for business users.
- Insights on:
    - Complaints vs commendations trend over time.
    - Common issues reported.
    - Route/branch performance analysis.
    - Employee/role-based commendation analysis.

Technologies Used

- **Python**: Pandas, Matplotlib, Seaborn, Plotly, WordCloud.
- **Power BI**: Data visualization and dashboarding.
- **Excel/CSV**: Dataset format.

Target Audience

- **Business Stakeholders**: To understand customer satisfaction trends.
- **Operations Managers**: To track route/branch performance.
- **HR/Training Teams**: To evaluate employee commendations and complaints.

Expected Outcomes

- A clean dataset ready for analytics.
- A set of Python-based visualizations showing trends and patterns.
- An interactive Power BI dashboard with KPIs, charts, and slicers.
- A comprehensive report summarizing insights and recommendations.