

# Task Performed: Data Analysis Project

## Task 1: Data Modeling & Cleaning

- Load and transform datasets in Power Query
- Handle duplicates, missing values, and ensure correct data types
- Create calculated columns:
  - $\text{Membership\_Duration} = \text{Today} - \text{Membership\_Since}$
  - Extract `Transaction_Year`, `Transaction_Month`

## Task 2: Churn & Retention Metrics

- Create Churn Rate KPI =  $(\text{Churned Customers} / \text{Total Customers}) * 100$
- Visualize churn rate by:
  - Region
  - Income Group
  - Channel (Store/Online)
  - Loyalty Tier
- Funnel Chart: Total Customers → Repeat Customers → Churned

## Task 3: Repeat Purchase Analysis

- Segment customers:
  - Low-Tier: 0–3 purchases
  - Mid-Tier: 4–8 purchases
  - High-Tier: 9+ purchases
- Compare avg. purchase frequency by Region, Age Group, Loyalty Tier
- Identify most purchased product categories by loyal customers

## Task 4: Promotion & Loyalty Impact

- % of transactions with promotion applied
- Compare avg. purchase amount with vs without promotions
- Churn rate across loyalty tiers
- Points Earned vs Redeemed by Tier (clustered column chart)
- Recommendations to improve redemption & retention

# Task 5: Store & Channel Performance vs Retention

- Merge store data with transactions
- Visualize:
  - Avg. transaction amount by Store Type
  - Churn rate by store type
  - Correlation between store opening year & retention

# Task 6: Customer Lifetime Value (CLV) Analysis

- $CLV = \text{Total Amount Spent} / \text{Membership Duration (Years)}$
- Segment customers into Low, Medium, High CLV
- Visualize:
  - CLV vs Days Since Last Purchase
  - CLV by Loyalty Tier & Region

# Task 7: Final Dashboard & Executive Summary

- Multi-page Power BI Report:
  - Page 1: KPIs (Churn, CLV, Repeat Rate)
  - Page 2: Loyalty & Promotion Impact
  - Page 3: Store/Channel Insights
  - Page 4: Segmentation (Churned, Repeat, High-Value)
- Slicers: Region, Channel, Income, Loyalty Tier
- Top 3 recommendations for Adidas:
  - Which customers to prioritize for retention?
  - Which channels are underperforming?
  - How to strengthen loyalty program engagement?