Leveraging Churn and Lifetime Value to Improve Customer Retention

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INTERACTIVE DATA
(EMAT-62110-001)
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Project Objective

Goals

- Analyzing the data to understand customer churn
  - Looked at lifetime value trends over time
- Focused on patterns by age, contract, and contract type
- Found insights to boost retention and guide growth strategies

Data Overview

Data source	▪ **Telco Customer Churn dataset** (from Kaggle)

Rows	Columns	Addition	Elimination
▪ 7043 Rows	▪ 50 columns	▪ 2 new columns added ▪ CLV & Average Monthly Spend	▪ Removing 25 irrelevant columns

27 Columns

Making Data Work: Collection, Cleaning, and Visualization Process

Exploratory Work

|	
1	Data preparation
2	Missing Values dealing
3	Creating New columns
4	Visualizations - Bar plots, Histograms, Line graph

Data Visualization

Graphs

- Barplot - Churned vs Non-Churned Customers
- Histograms - Customer Churn by Reason Category & CLV Distribution by Age Group
- Line plot - Churn Trend Across Contract Types

Bar Plots

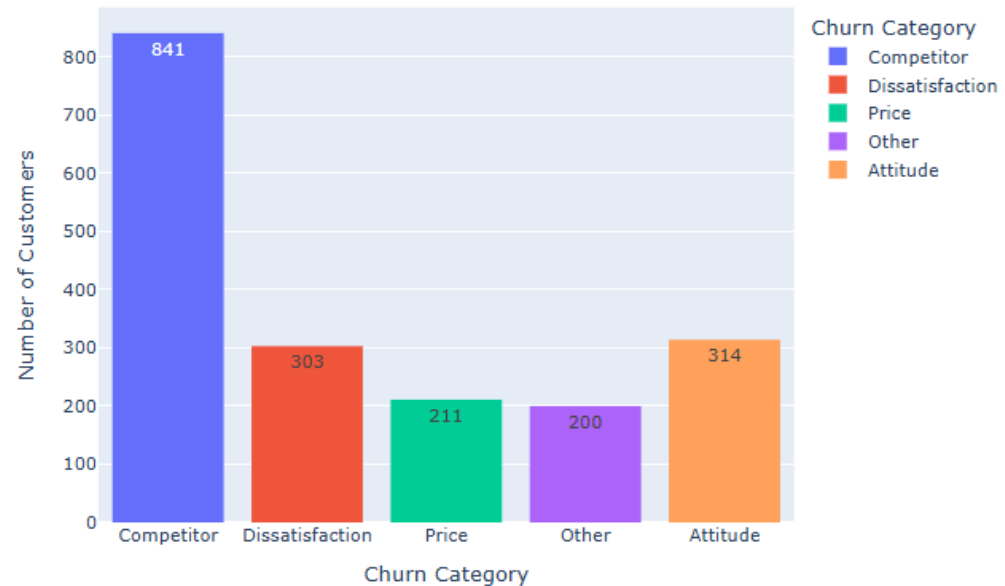- Churned vs Non-Churned Customers

- Findings- **26% churned**
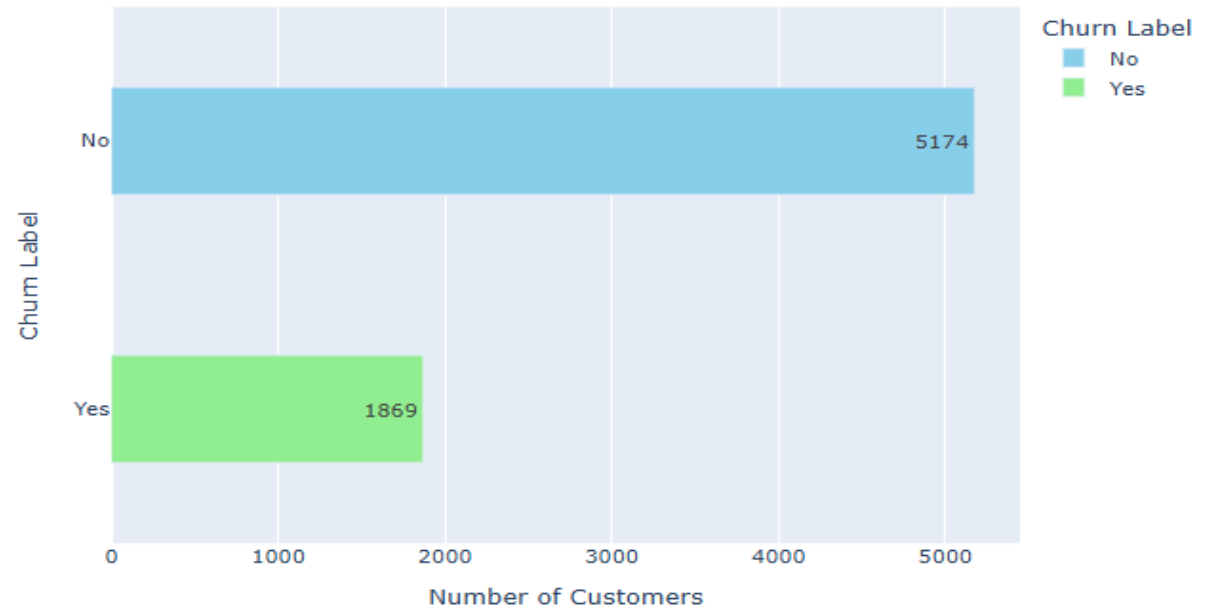
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Histogram

- Customer Churn by Reason Category
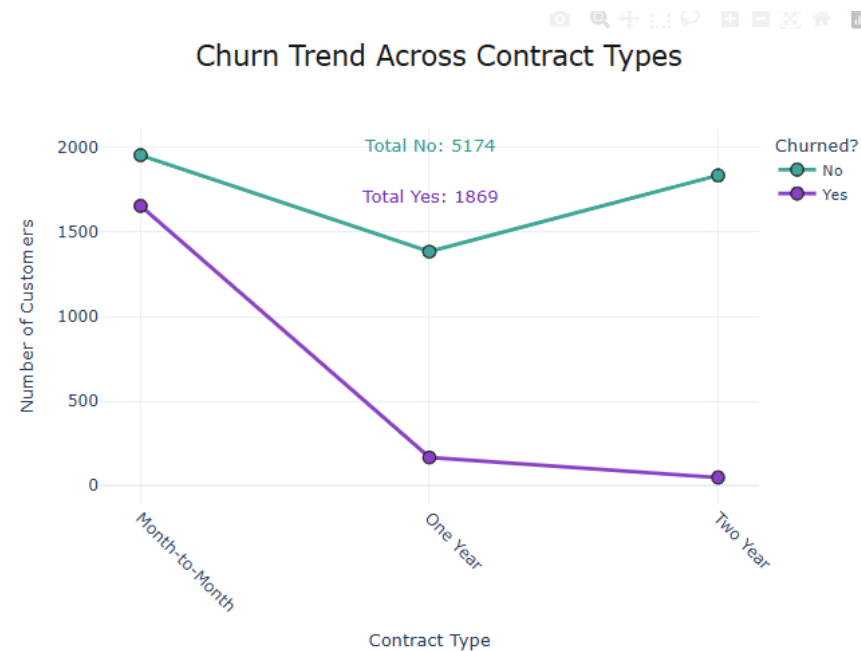
- Findings-
  Competitor

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Line Plot

- Churn Trend Across Contract Types

Churn Trend Across Contract Types
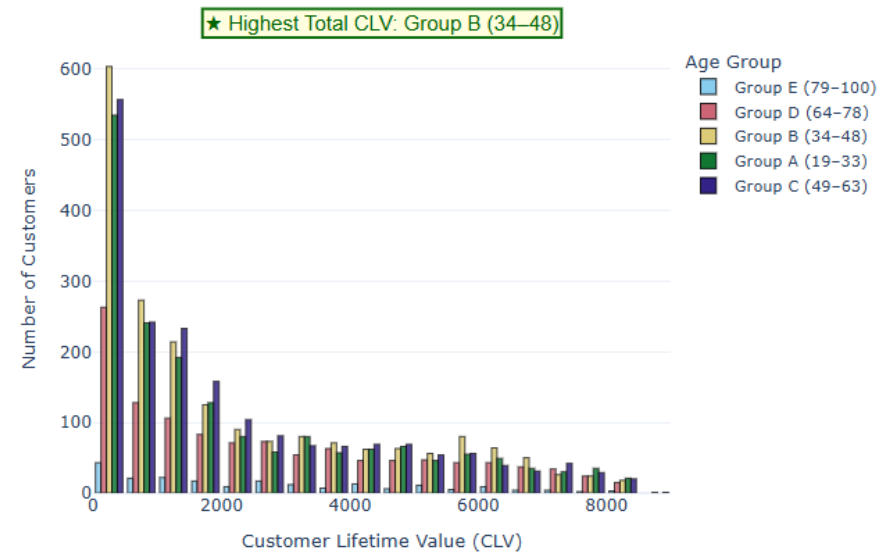
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Histogram

- CLV Distribution by Age Group

- Findings- **High CLV- Group B**

CLV Distribution by Age Group (Grouped Bars)

★ Highest Total CLV: Group B (34–48)

Age Group
- Group E (79–100)
- Group D (64–78)
- Group B (34–48)
- Group A (19–33)
- Group C (49–63)

Recommendations

Action Plan

Prioritize Ages 34–48
Highest CLV group — focus on loyalty-building through rewards and personalized engagement

Promote Long-Term Contracts
Monthly plan users churn more — offer incentives to shift toward yearly or 2-year plans.

Address Churn Drivers
Dissatisfaction and competitor offers are major churn reasons — target these pain points proactively.

Engage Younger Customers
Lower current CLV, but long-term potential — invest in onboarding and creative engagement.

Limitations

Building Predictive Models

One thing I noticed is that my project focuses on analyzing what's already happened—we're not yet predicting churn or future CLV. Also, some of the data, like churn reasons, might not be super accurate or complete. If I had more time, I'd try building predictive models and maybe collect more detailed feedback from customers. That way, we could go from just understanding the problem to actually getting ahead of it.