

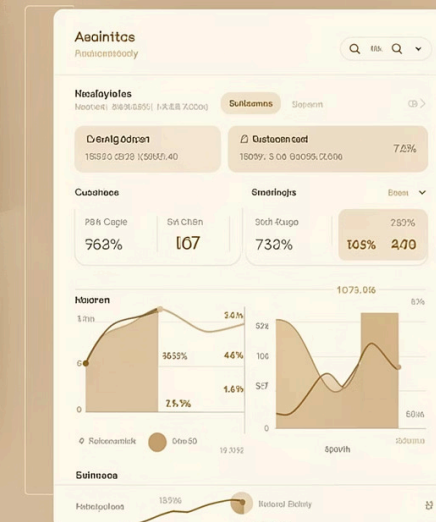


# Customer Churn Analysis

## Statistical & Business Analytics Project

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Understanding customer churn patterns and identifying key drivers using data analysis and statistical methods.



# Problem Statement & Objectives

## Problem Statement

- Customer churn leads to significant revenue loss
- Retaining existing customers is more cost-effective than acquiring new ones
- Businesses need early identification of churn-prone customers

## Project Objectives

- Measure customer churn rate
- Identify key factors influencing churn
- Validate findings using statistical techniques

# Dataset & Methodology

## Dataset Overview

- Customer-level historical data
- Key features: tenure, monthly charges, total charges, churn status

## Methodology

- Data cleaning and preprocessing
- Exploratory Data Analysis (EDA)
- Statistical hypothesis testing
- Insight generation

# Exploratory Data Analysis (EDA)

## Key EDA Activities

- Calculated overall churn rate
- Analyzed tenure distribution across churned and retained customers
- Examined correlations between numerical variables

## Insights

- Higher churn observed among low-tenure customers
- Tenure shows strong influence on churn behavior

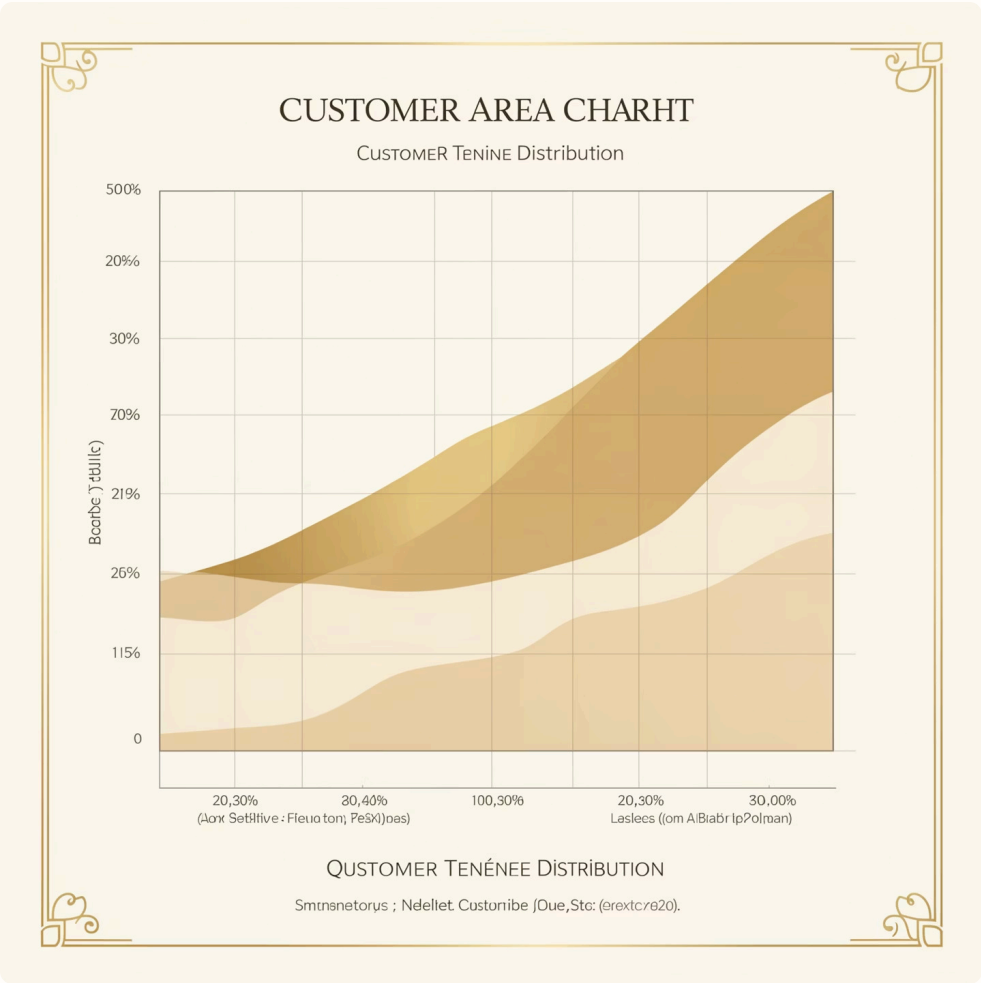
# Statistical Analysis & Findings

## Statistical Techniques Used

- Hypothesis testing (Independent t-test)
- Comparison between churned and non-churned customers

## Key Findings

- Statistically significant difference in tenure
- Customers with shorter tenure are more likely to churn



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# Business Insights & Recommendations

## Business Insights

- Churn risk is highest during early customer lifecycle
- Customer engagement in initial months is critical

## Recommendations

- Improve onboarding experience
- Introduce early retention programs
- Monitor churn indicators proactively

# Conclusion & Thank You

## Conclusion

- Data-driven analysis identified key churn drivers
- Statistical validation strengthened decision-making
- Insights support effective retention strategies

Thank you for your attention!