

Project Documentation: Festive - Event & Party Supplies

Business Overview

Festive is a fictional brand specializing in event and party supplies. The goal of this project is to analyze sales performance, customer behavior, and revenue trends to derive actionable insights that could help optimize business strategy.

Project Scope & Objectives

This project focuses on:

- **Sales Analysis:** Understanding revenue trends over time.
- **Customer Behavior:** Identifying purchase patterns and retention rates.
- **Customer Demographics:** Providing an overview of customer age distribution to understand the typical buyer profile.
- **Cohort Analysis & CLTV:** Evaluating long-term customer value and retention trends.

Key Insights

Revenue Trends & Seasonal Patterns

- Sales show **some fluctuations over time**, with notable peaks in mid-year, potentially linked to seasonal celebrations or event planning cycles.
- December revenue is **underreported due to missing data**, impacting the accuracy of end-of-year comparisons.
- Overall, revenue distribution appears relatively stable without extreme seasonal volatility.

Customer Demographics & Buying Behavior

- The majority of buyers are between **25 and 65 years old**, suggesting that the purchasing decisions are likely made by event planners, parents, or business owners rather than end consumers (e.g., children or teens).
- **Younger customers (below 25) make up a very small percentage of direct buyers**, but this does not necessarily mean that products aimed at younger age groups would not perform well. Instead, marketing should be tailored to the actual buyers.

Cohort Analysis & Customer Lifetime Value (CLTV)

- Retention rates **do not follow a strictly linear downward trend**; instead, they decline initially after purchase, remain low for several months, and then increase at later stages in some cohorts. This suggests that some customers return after a gap rather than continuously making purchases.
- The **CLTV dashboard indicates an average customer lifespan and revenue per cohort**, which can inform targeted retention strategies.
- **High-value cohorts** (customers with strong repeat purchase behavior) suggest potential opportunities for **loyalty programs or incentives** to encourage repeat business.

Business Recommendations

1. **Target marketing toward key buyers** (event planners, parents, and businesses) rather than assuming direct purchases from end consumers.
2. **Introduce customer retention incentives**, such as bulk discounts, loyalty rewards, or special offers for repeat buyers.
3. **Use December data cautiously**, as missing records negatively affect its revenue trends.
4. **Further explore seasonality trends** to determine whether specific holidays or events consistently drive sales spikes.

Disclaimers & Limitations

- This is a **fictional project** based on available data and does not reflect an actual company's financials.
- **Data inconsistencies exist**, particularly missing values for December, which impact total revenue calculations.
- The **product description column was excluded from analysis** due to inconsistencies and lack of structured data.
- A separate document covers **data cleaning and preprocessing details** for transparency on adjustments made.

Conclusion

This analysis provides a business-oriented overview of Festive's sales performance, customer behavior, and revenue trends. While data limitations exist, the insights can still guide strategic decisions regarding product focus, marketing, and customer retention. Further refinement of the dataset and additional external factors (e.g., industry benchmarks, seasonality trends) could enhance future analyses.

Dashboard Visualizations:

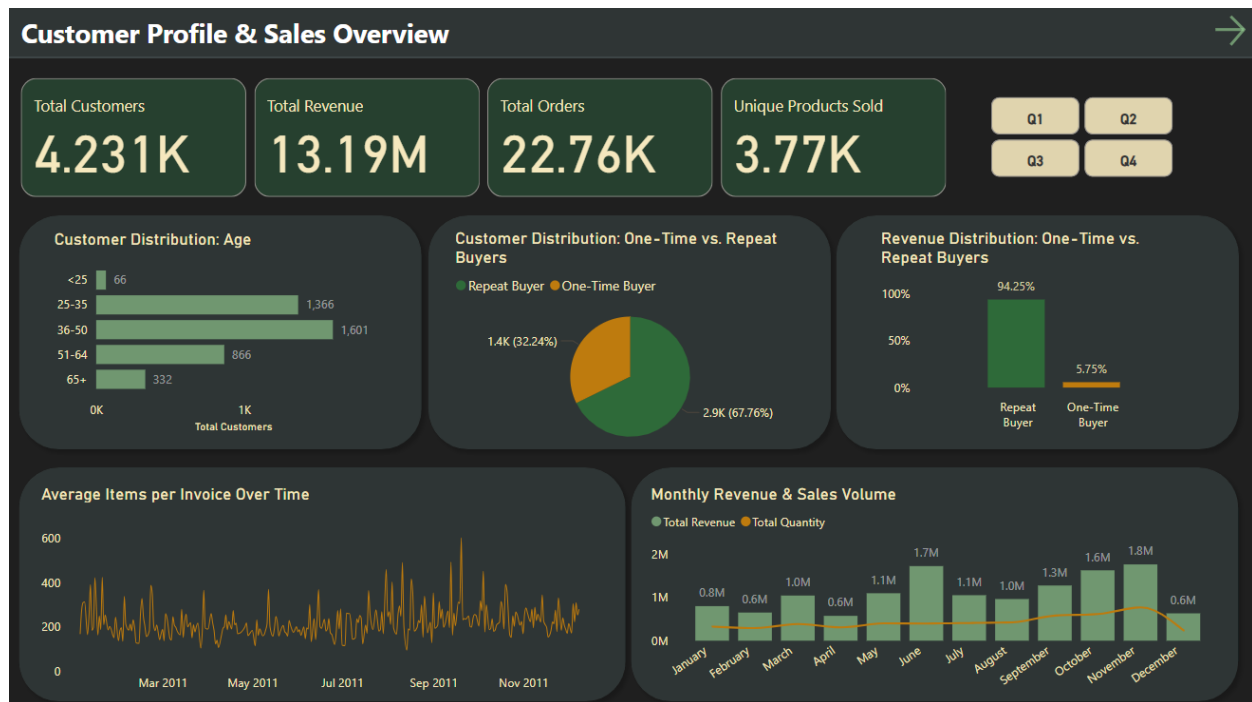


Figure 1: Customer Profile & Sales Overview

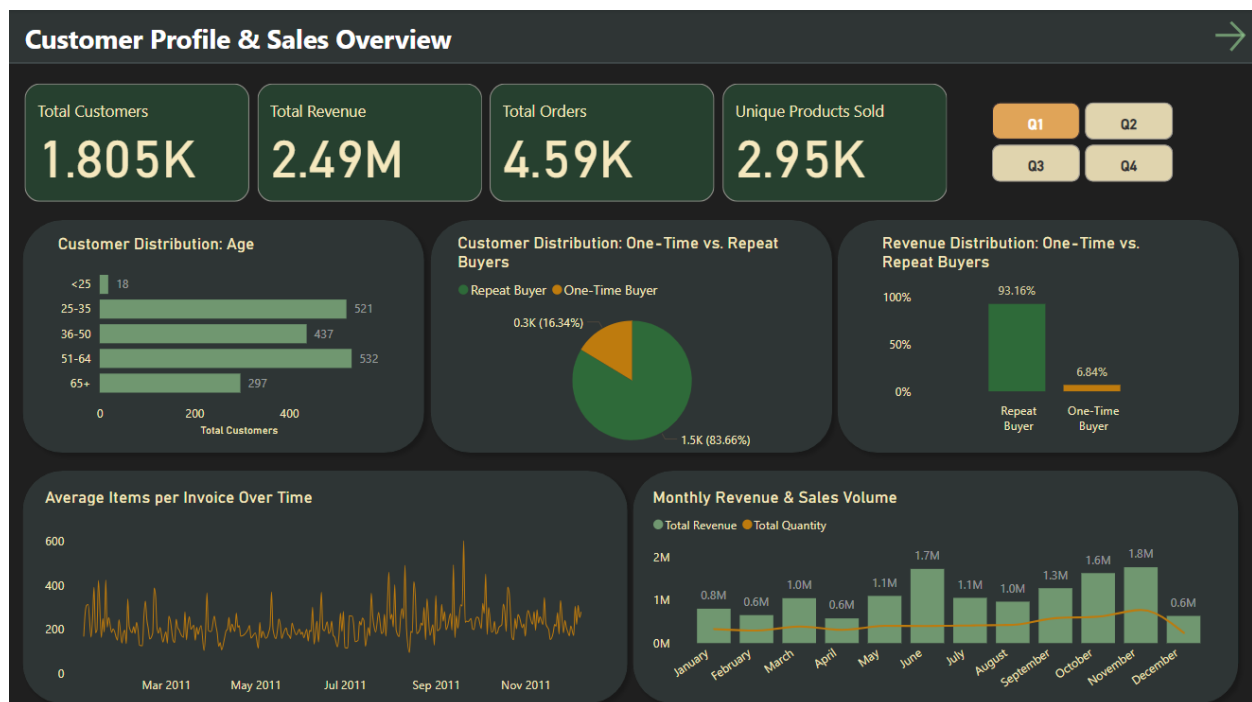


Figure 2: Customer Profile & Sales Q1 Overview

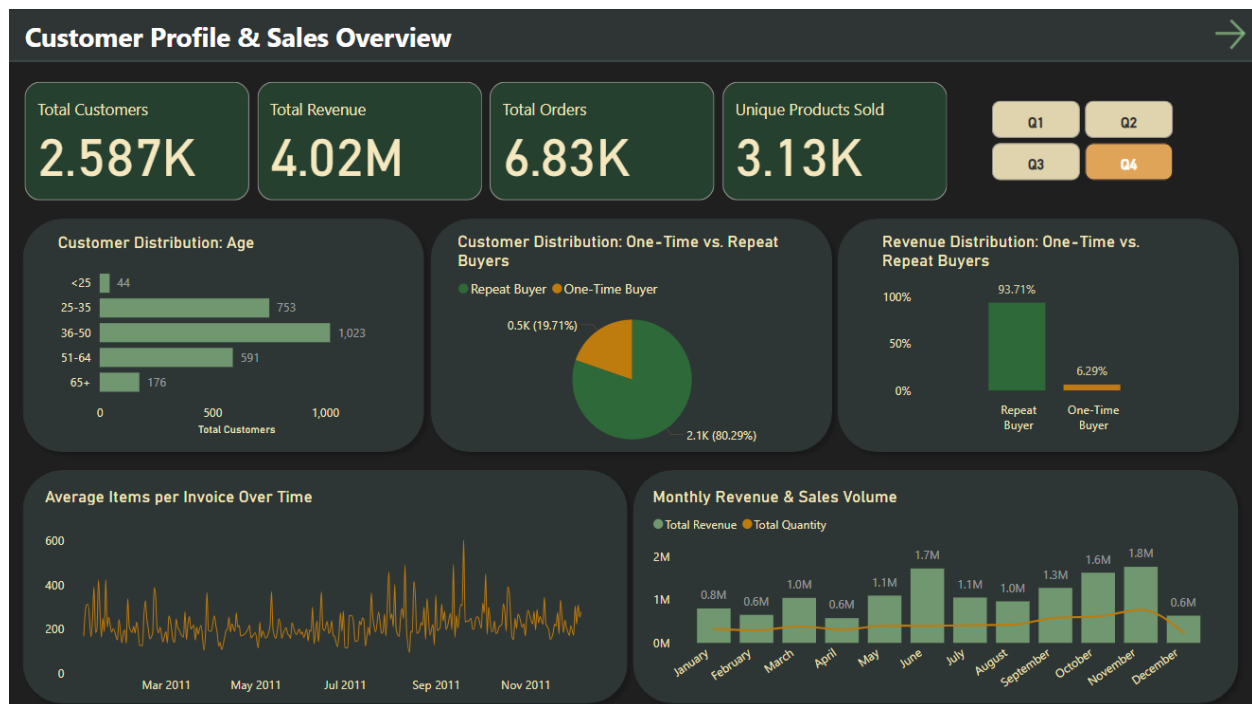


Figure 3: Customer Profile & Sales Q4 Overview

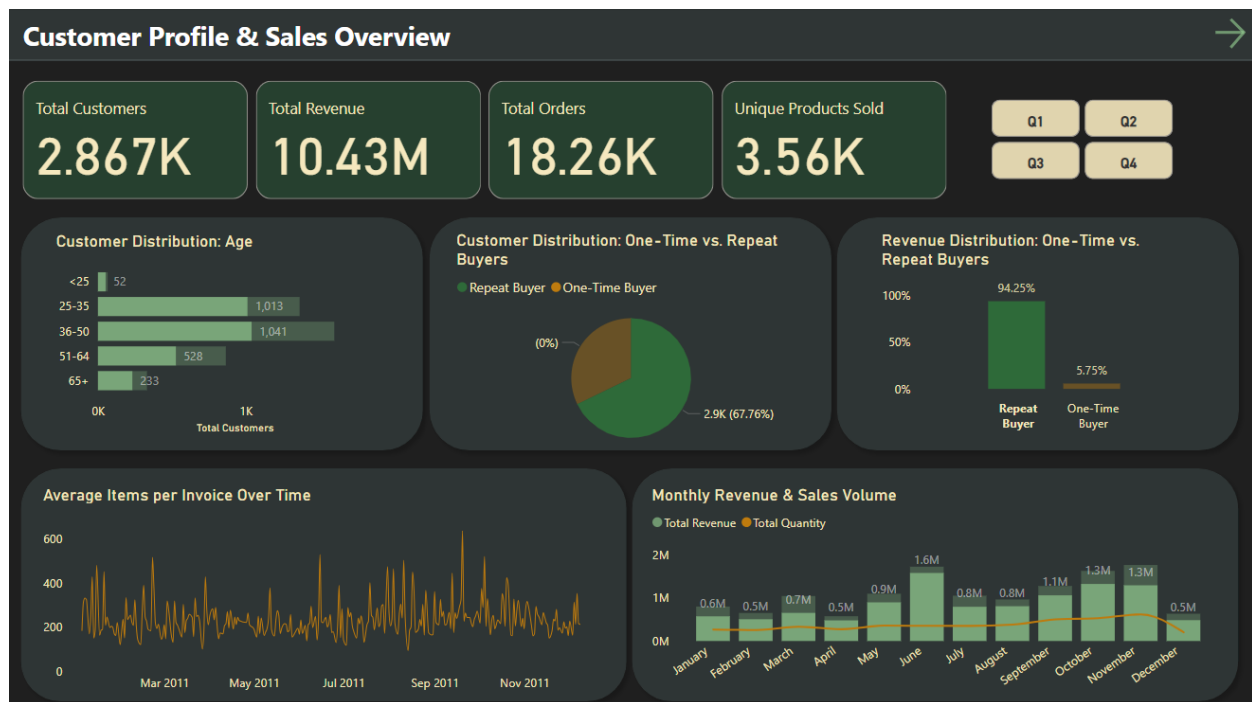


Figure 4: Customer Profile & Sales Repeat Buyers Overview

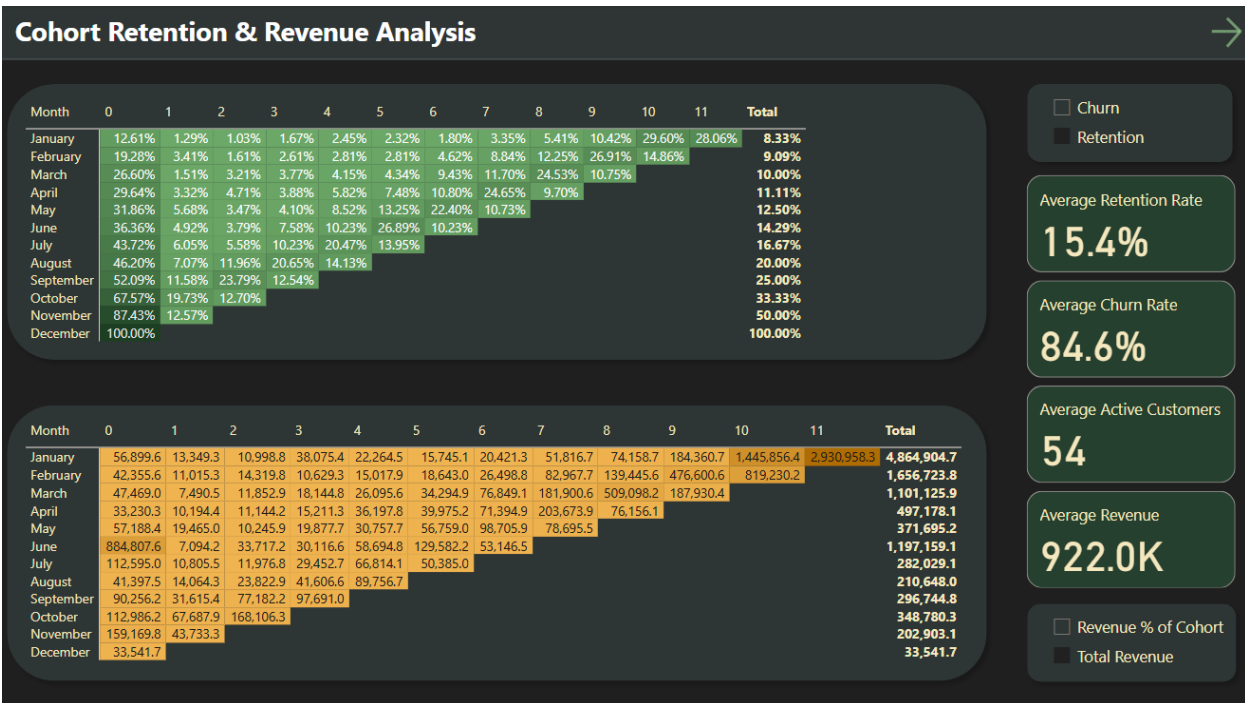


Figure 5: Cohort Retention & Churn Analysis (retention rates)

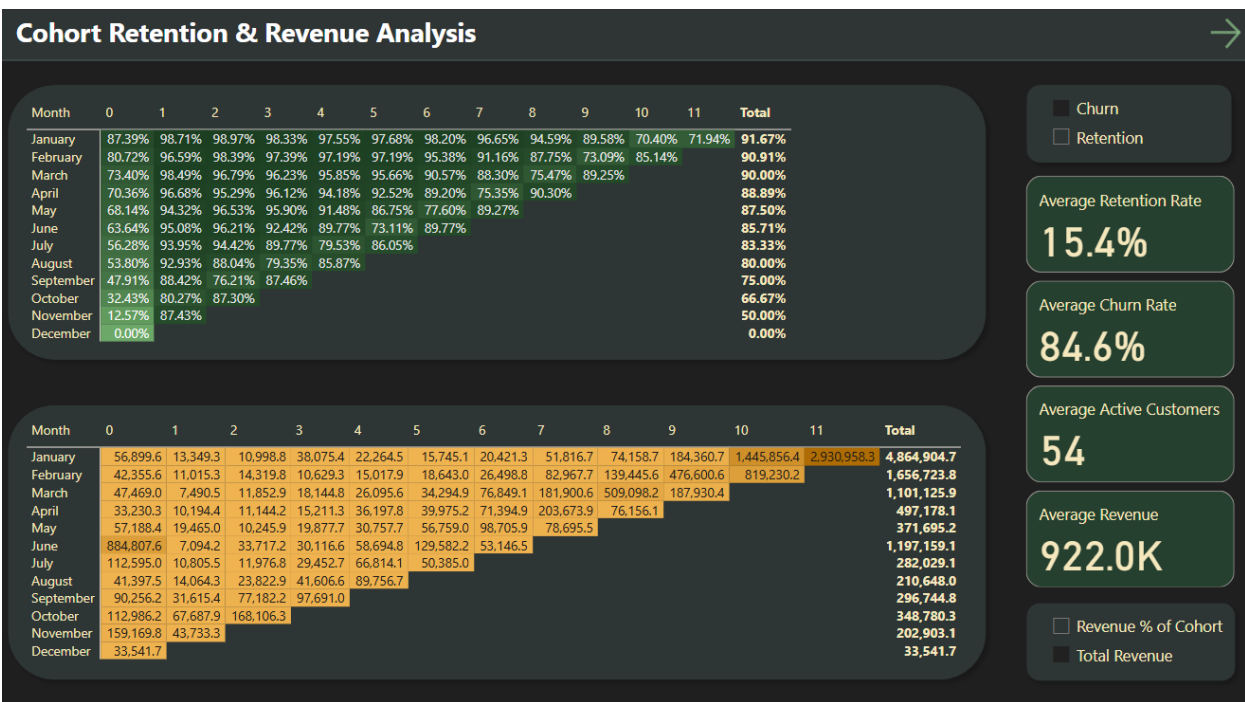


Figure 6: Cohort Retention & Churn Analysis (churn rates)

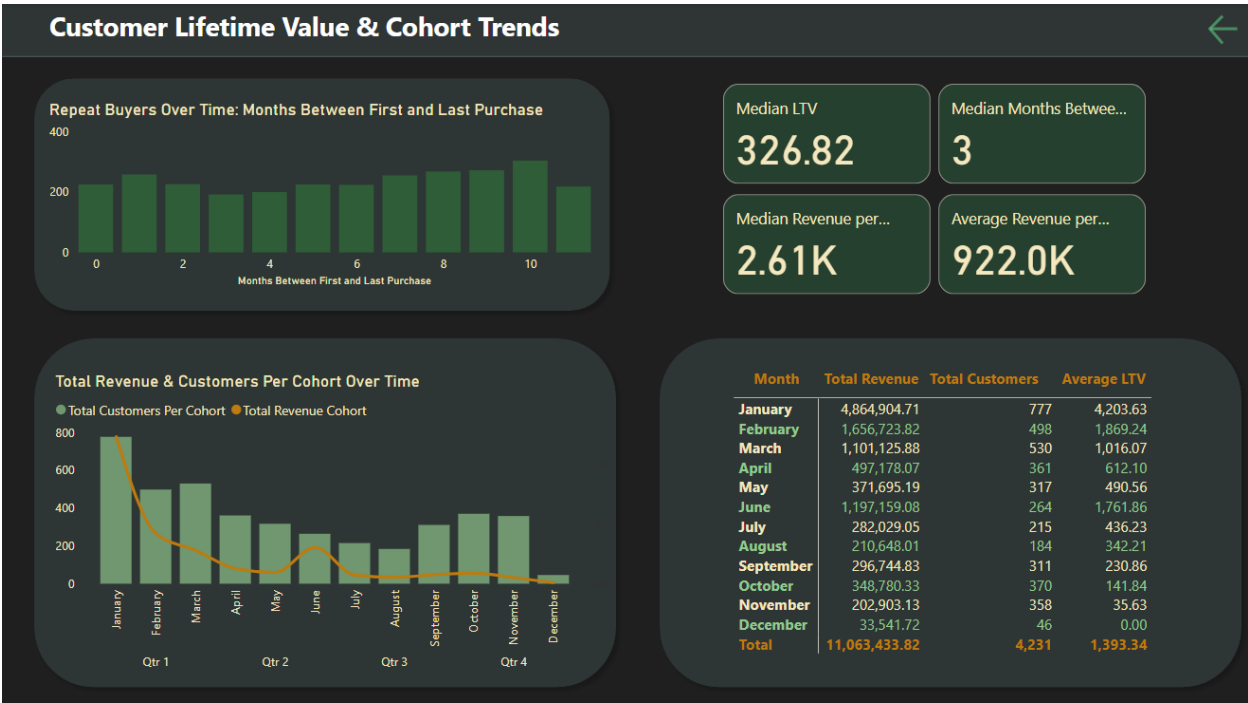


Figure 7: Customer Lifetime Value & Cohort Trends