Sales Analysis

Sales Analysis.xlsx

Part 1: Analytics and Data Management

Trends and Analysis

1. **Number of Leads:**

Month	Number of Leads
January	1500
February	1600
March	1700

▲ An increase of **13.3%** is a **positive** trend.

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2. **Conversion to the first transaction:**

Month	Conversion to First Deal
January	14%
February	12%
March	10%

▼ A decrease of **29%** is a **negative** trend.

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3. **Average check for the first transaction:**

Month	Average First Transaction Check
January	9000

Month	Average First Transaction Check
February	8500
March	8000

▼ A decrease of **11.11%** is a **negative** trend.

4. **Average number of repeat purchases:**

Month	Average number of repeat purchases
January	1.7
February	1.5
March	1.3

▼ A decrease of **23.53%** is a **negative** trend.

5. **Average check of a repeat transaction:**

Month	Average repeat transaction check
January	7000
February	6800
March	6500

▼ A decrease of **7.14%** is a **negative** trend.

6. **Gone after the first trade:**

Month	Gone after the first deal
January	7000
February	6800
March	6500

▼ An increase of **18.42%** is a **negative** trend.

Conclusion

The main negative trends are related to deteriorating conversion rates, lower average check and fewer repeat purchases. To remedy the situation, it is

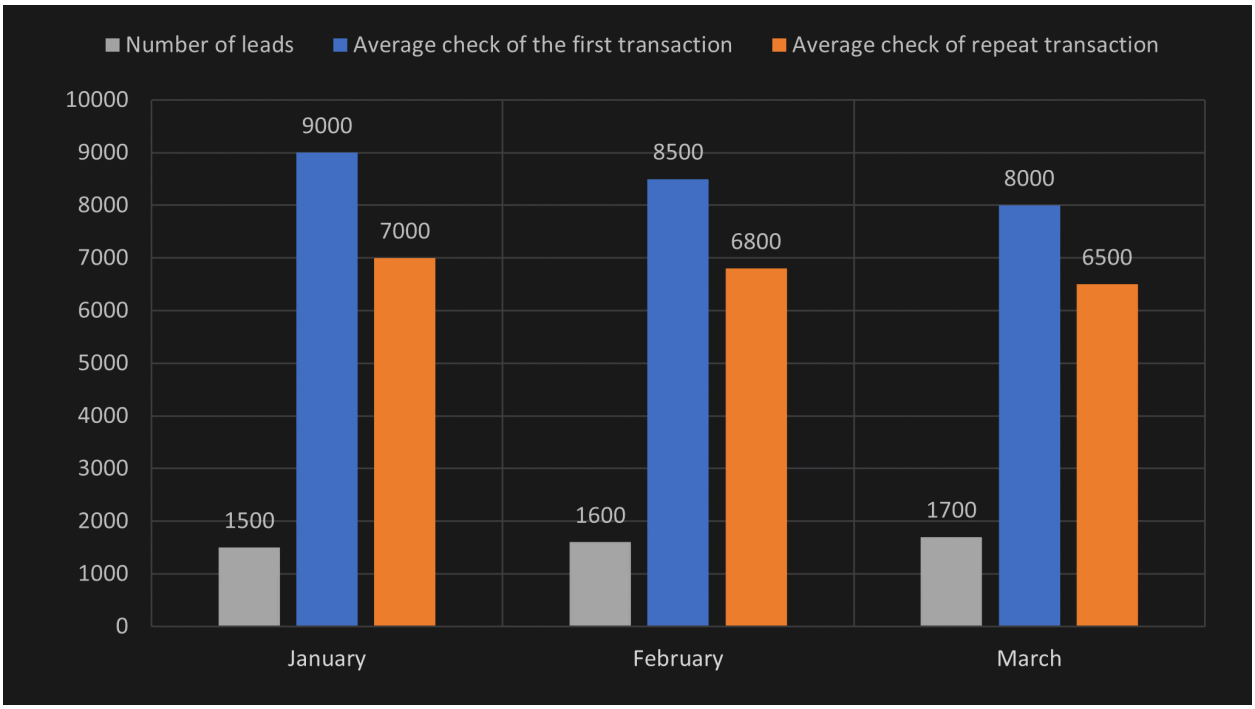
important to work on lead quality, customer loyalty and strategies to increase the amount of purchases.

Reasons and Recommendations for Metrics Trends

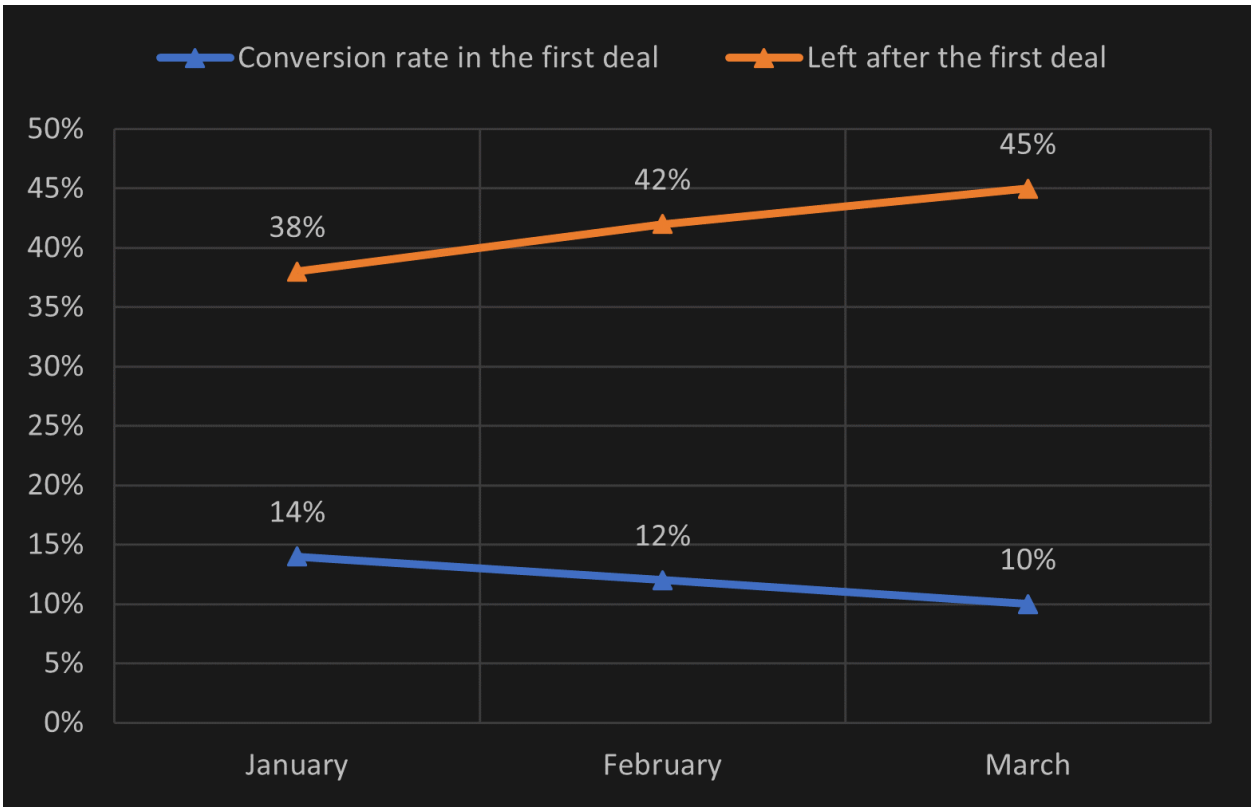
Metric	Trend	Possible Causes	Recommendations
Number of Leads	+13,3%	Effective marketing	Optimize ad campaigns for further growth.
First Deal Conversion	-28.57%	The terms of the first deal became less attractive.	Improve lead qualification and train the sales team
Average First Deal Check	-11.11%	Customers choose cheaper options	Develop upsell strategies
Average Repeat Purchase	-23.53%	Ineffective retention strategies	Conduct customer satisfaction survey
Average Repeat Purchase	-7.14%	Reduced number of purchases / price reductions	Develop subscription models or programs with accumulative discounts
Gone After First Transaction	+18.42%	Bad post-purchase experience	Analyze feedback and reasons for not making repeat purchases

Data Visualization

Graph of changes in the number of leads, average check of the first and repeat transactions



Graph of changes in conversion to the first deal and the number of people who left after the first deal.



Part 2: Cohort Analysis

Cohort Table

Month	First purchase	Repeat purchase after 1 month	Repeat purchase in 2 months
January	210	105 (50%)	85 (40%)
February	192	84 (44%)	68 (35%)
March	170	68 (40%)	-

Trend Analysis

- **January cohort**:
  - After 1 month: 50% repeat purchases.
  - After 2 months: 40% repeat purchases.

    - **Decrease**: By 10 percentage points in the second month.
- **February cohort**:
    - After 1 month: 44% repeat purchases.
    - After 2 months: 35% repeat purchases.
    - **Decrease**: By 9 percentage points in the second month.
- **March cohort**:
    - After 1 month: 40% repeat purchases.
    - Data for 2 months is not yet available.

Trend:

- Repeat purchases decline over time for all cohorts.
- The **January cohort** shows the largest decline (down 10 percentage points in the second month).
- The **March cohort** shows the lowest repeat purchase rate after 1 month (40%), which may indicate worsening customer retention.

Using cohort analysis to improve customer retention

Cohort analysis helps you identify customer retention problems and develop strategies to address them. Here are some recommendations:

Recommendations

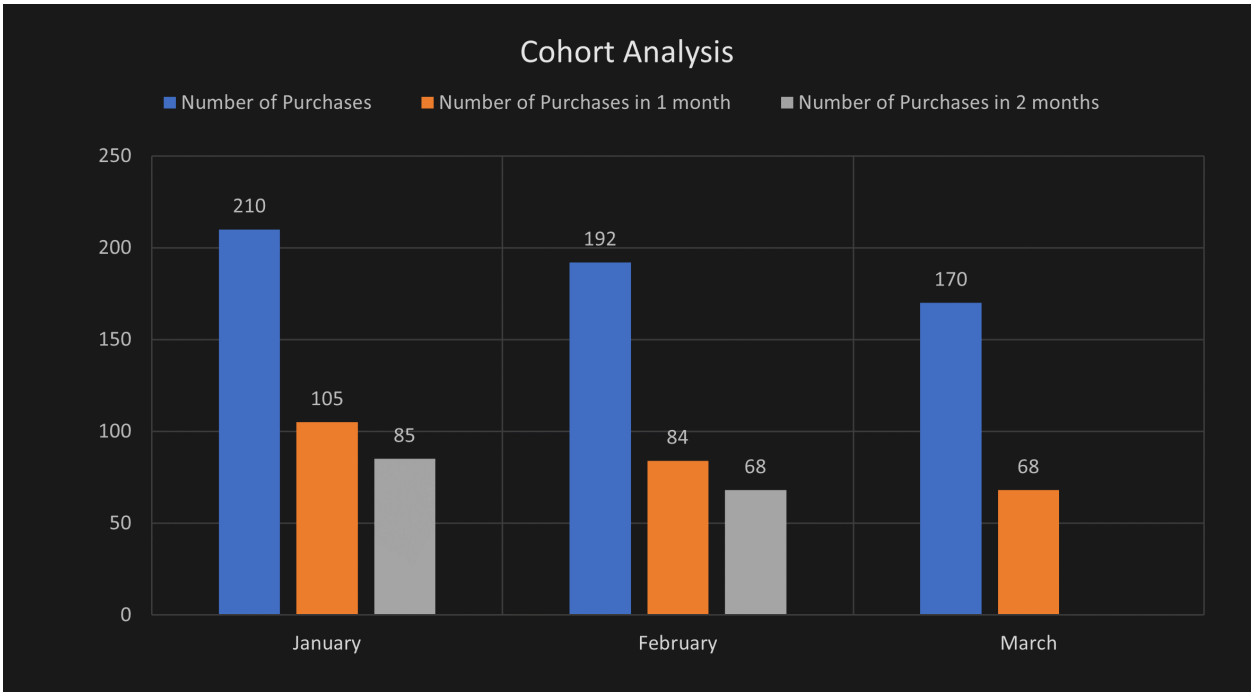
1. **Improve interactions after the first purchase**:
    - Implement a follow-up system (e.g., thank-you letters, requests for feedback).
    - Offer customers discounts or bonuses for repeat purchases.
2. **Loyalty programs**:
    - Create a loyalty program that encourages customers to return (e.g., savings points or discounts for repeat purchases).
3. **Personalization**:

- Use purchase data for personalized offers (e.g., product recommendations based on past purchases).

4. **Analyze the causes of churn**:
   - Gather feedback from customers who haven't returned to understand their reasons.
   - Address issues that may be causing churn (e.g., product or service quality).
5. **Improve onboarding**:
   - Simplify the onboarding process for new customers (e.g., training materials, post-purchase support).

Visualization

Graph of changes in number of purchases over 3 months



Bottom line

Cohort analysis shows that customer retention is declining over time, especially in the March cohort. To improve retention, you need to:

- Improve customer interactions after the first purchase.
- Implement loyalty programs and personalized offers.
- Analyze the causes of churn and address them.

Part 3: Applying Neural Networks to Automation

Choosing a process to automate

Process: Analyze customer feedback.

Why this process.

- Customer feedback contains a lot of valuable information, but analyzing it manually requires significant time and human resources.
- Automating feedback analysis can help you quickly identify key themes, sentiments, and customer concerns.

Neural Network Application

Neural network: GPT (e.g., GPT-4).

How it will help:

- **Feedback classification**: A neural network can automatically categorize reviews by topic (e.g., product quality, delivery, service).
- **Sentiment analysis**: Determining the tone of reviews (positive, neutral, negative).
- **Insights Extraction**: Identify frequently mentioned problems or suggestions from customers.
- **Report generation**: Automatically create summaries and visualizations based on analysis.

Example query for GPT

Analyze the following customer reviews and complete the following tasks:
1. Classify reviews by topic (e.g. product quality, delivery, service).
2. Determine the sentiment of each review (positive, neutral, negative).
3. Identify the most frequently mentioned issues and suggestions.
4. Create a summary of key insights and visualize the data in a table and chart s.

Sample reviews:
1. "Delivery was fast, but the quality of the product leaves much to be desire d."
2. "The service was excellent, thank you!"
3. "The order arrived late and the product was damaged."
4. "Very pleased with the quality, will recommend to friends."

Benefits

Resources saved

- **Time Resources**: Automating feedback analysis will reduce the processing time from hours to minutes.
- **Human Resources**: Analysts will be able to focus on strategic tasks rather than routine feedback processing.

Improved metrics

- **Customer satisfaction**: Quickly identifying and fixing issues will improve customer satisfaction.
- **Customer Retention**: Responding to negative reviews in a timely manner will help reduce customer churn.
- **Marketing Effectiveness**: Analyzing positive reviews will help identify product strengths and leverage them in marketing campaigns.

Bottom Line

Using GPT to automate the analysis of customer reviews will allow to:

- Save time and human resources.
- Quickly identify key issues and improve service quality.
- Increase customer satisfaction and retention.