

A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes. Some nodes are solid blue circles, while others are white circles with blue outlines. The nodes are connected by thin, light gray lines, creating a mesh-like structure.

# **Homework 05**

# **Customer Lifetime Value**

# **Dashboard**

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A decorative network diagram in the bottom-right corner, similar to the one in the top-left. It shows a cluster of nodes, with some highlighted in blue and others in white with blue outlines, connected by a network of thin gray lines.

# What is CLV

CLV is the value of a customer relationship based on the present value of the projected future cash flows from relationship.

It used to estimate cost for customer management. In some events, the marketer spend a lot of money for acquire new customer and retain existing customer. but they didn't concern about return on investment.



# How to Measure It

- Average number of transaction (T)
- Average value of an order (AOV) or Ticket Size
- Average gross margin (AGM)
- Churn rate : Percentage of the customers who leave the platform over a specified time period.

$$\text{Churn rate} = \left[ \frac{CB - CE}{CE} \right] \times 100$$

CB = Customers at the beginning of a month CE = Customers at the end of a month

- Retention Rate : Percentage of the customers who stay on the platform over a specified time period.

$$\text{Retention Rate} = 1 - \text{Churn rate}$$

- Average lifespan (ALT) : how long the average customer has been with your company

$$\text{ALT} = 1 / \% \text{Churn Rate}$$

- Customer Lifetime Value (CLV) : the customer's revenue throughout the relationship

$$\text{CLV} = \frac{T \times \text{AOV} \times \text{AGM} \times \text{ALT}}{\text{Number of customer for the period}}$$

Average revenue per user (ARPU) : the average revenue per a customer

$$\text{ARPU} = \frac{\text{Total revenue for the period}}{\text{Number of customer for the period}}$$



# Customer Lifetime Value Dashboard

Total Order

**4.3K**

MOM -4.8%

Ticket Size

**11.2**

MOM -17.2%

Total Revenue

**48.2K**

MOM -21.2%

Month

200801

Year

2008

Customer Lifetime Value

**-0.5K**

MOM -56.6%

Active Customer

**1.3K**

MOM -6.7%

Average Revenue per User

**36.7**

MOM -15.6%

Churn Rate

**-6.7%**

MOM -3.2%

Average Lifespan

**-15.0%**

MOM 14.2%

## Summary of Customer

Shop month	Total Revenue	Total Order	Ticket Size	CLV	Active Customer	ARPU	Churn Rate	ALT
January	48,159	4,298	11.2	-549	1,314	37	-6.7%	-15.0%
February	49,920	4,257	11.7	1,573	1,345	37	2.4%	42.4%
March	55,391	4,664	11.9	1,638	1,378	40	2.5%	40.8%
April	52,889	4,397	12.0	292	1,540	34	11.8%	8.5%
May	59,575	4,712	12.6	1,131	1,591	37	3.3%	30.2%
June	56,723	4,589	12.4	7,055	1,599	35	0.5%	198.9%
July	10,850	898	12.1	-29	595	18	-62.8%	-1.6%

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