**Introductions:**  
**Customer Lifetime Value(CLTV)**

"Customer Lifetime Value is a monetary value that represents the amount of revenue or profit a customer will give the company over the period of the relationship". CLTV demonstrates the implications of acquiring long-term customers compare to short-term customers. Customer lifetime value (CLV) can help you to answers the most important questions about sales to every company:

* + How to Identify the most profitable customers?
  + How can a company offer the best product and make the most money?
  + How to segment profitable customers?
  + How much budget need to spend to acquire customers?

CLTV indicates the total revenue from the customer during the entire relationship. CLTV helps companies to focus on those potential customers who can bring in more revenue in the future.

CLTV = ((Average Order Value x Purchase Frequency)/Churn Rate) x Profit margin.

Please check the below step for how to calculate CLTV.

**Algorithm:**

**Step1: Calculate CLTV.**

1. Calculate the average order value of customers:
   1. Average order value =  Total money spent / total number of transactions
2. Calculate Purchase Frequency:
   1. Purchase Frequency = Total Number of Orders / Total Number of Customers
3. Calculate Repeat rate and Churn rate:
   1. Repeat rate = How many customers have numbers of transactions more than one / total numbers of customers
   2. Churn rate = 1 - repeat rate
4. Calculate the profit margin:
   1. Profit margin is the commonly used profitability ratio. It represents how much percentage of total sales has earned as the gain. Let's assume our business has approx 5% profit on the total sale.
   2. Profit margin = Total money spent on each customer \* 0.05
5. Calculate customer lifetime value:
   1. Customer value = (Average Order Value \* Purchase Frequency) / Churn rate
   2. Customer lifetime value = Customer value \* Profit margin

**Step2: Predictive modelling.**

Build a regression model for existing customers. Take recent six-month data as independent variables and total revenue over existing time( here taking 2 years)  as a dependent variable and build a regression model on this data.

**Pros and Cons of CLTV:**

CLTV helps you to design an effective business plan and also provide a chance to scale your business. CLTV draw meaningful customer segments these segment can help you to identify the needs of the different-different segment.

Customer Lifetime Value is a tool, not a strategy. CLTV can figure out the most profitable customers, but how you are going to make a profit from them, it depends on your strategy. Generally, CLTV models are confused and misused. Obsession with CLTV may create blinders. Companies only focus on finding the best customer group and focusing on them and repeat the business, but it’s also important to give attention to other customers.