



Consumer Analytics

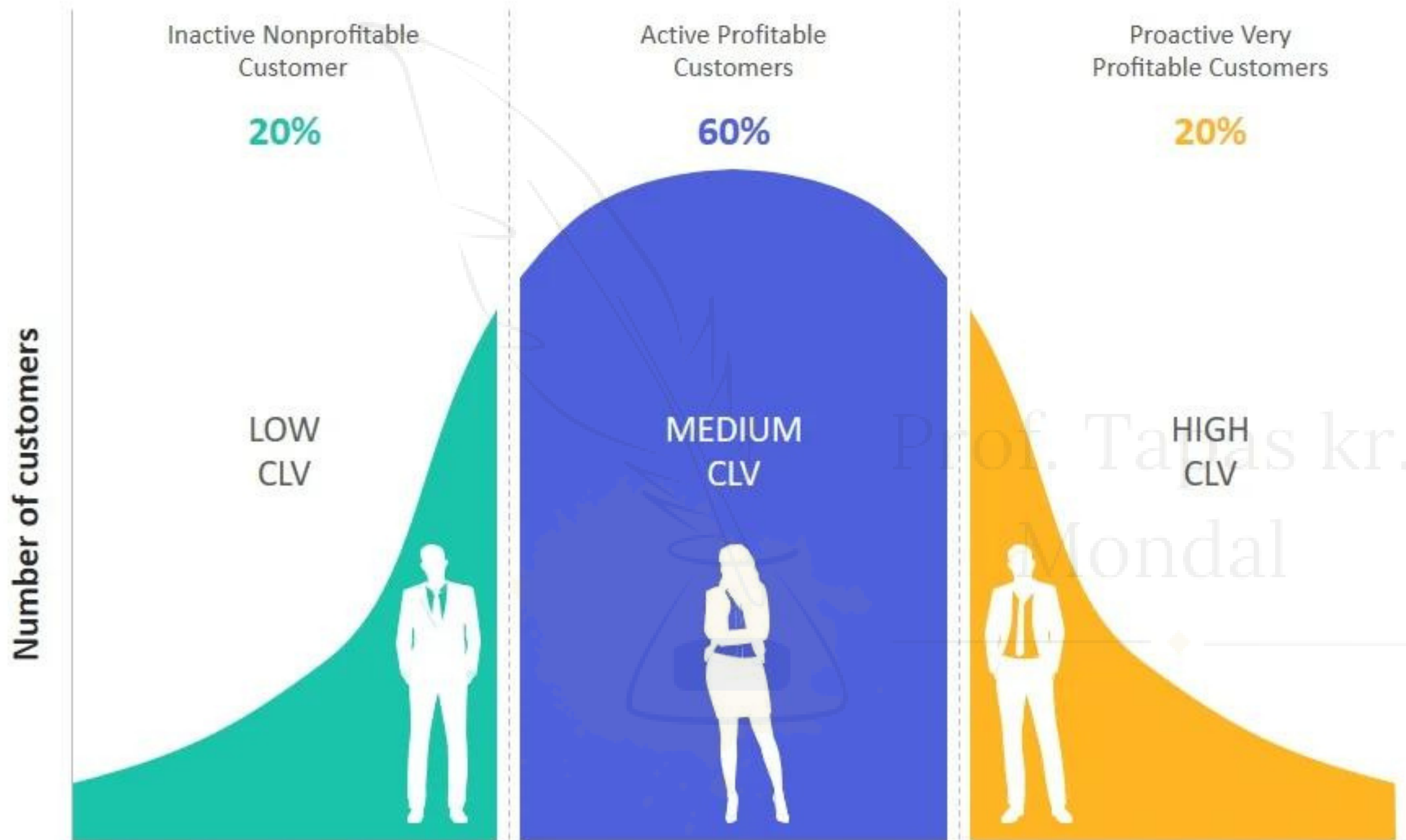


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CUSTOMER LIFETIME VALUE



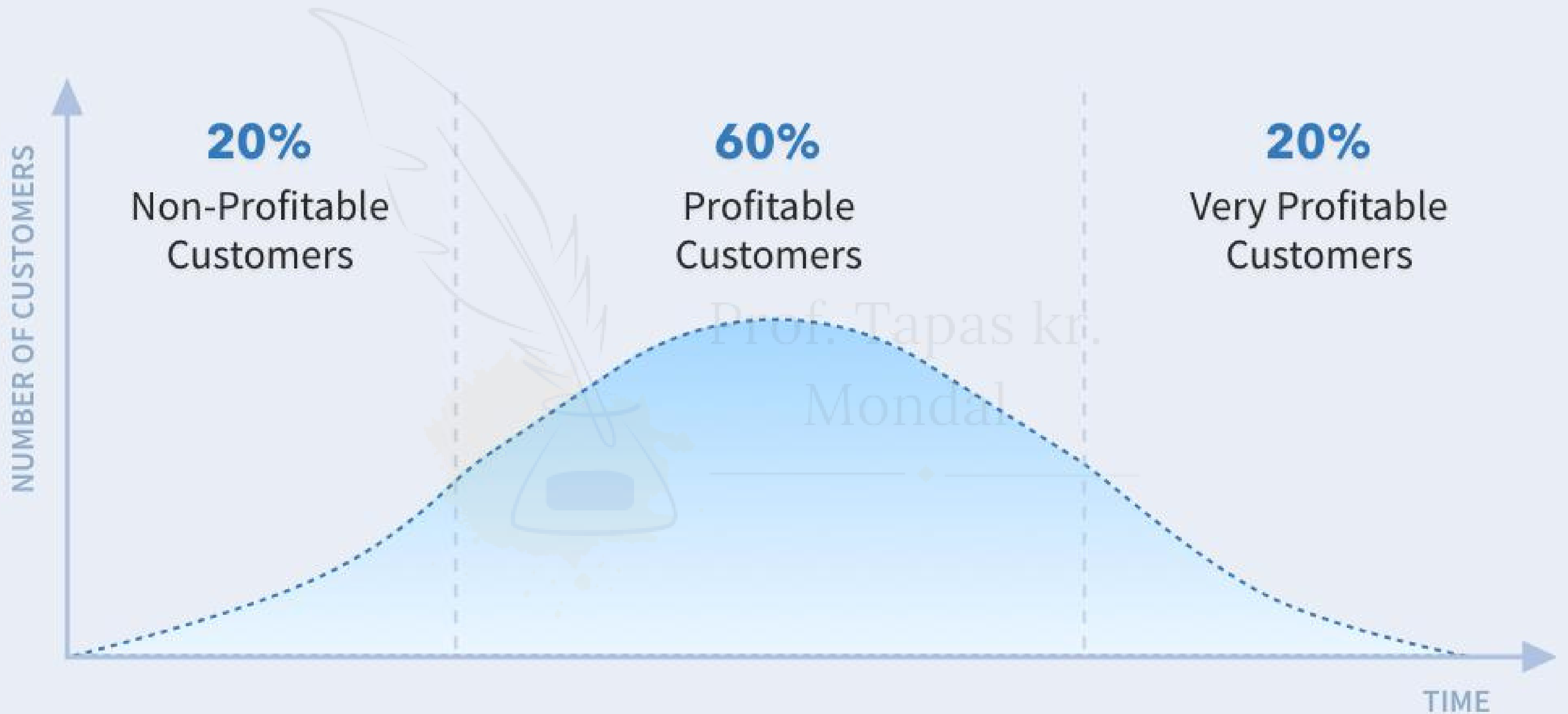
$$\text{Lifetime Value} = (\text{Average Order Value}) \times (\text{Number Of Repeat Sales}) \times (\text{Average Retention Time})$$



Our Options

A depiction of the Customer Life Value (CLV) of the company segregated by low, medium and high. Higher percentage falls under the medium CLV (60%)

Customer Lifetime Value is the net profit contribution of the customer to the firm over time



CUSTOMER LIFETIME VALUE

— CALCULATION —



The diagram illustrates the calculation of Customer Value (CV). On the left, a light blue rectangular box contains the letters 'CV' in white, with a background of clock faces and a person icon. This is followed by an equals sign. To the right of the equals sign are three elements: a pink circle with the letter 'A', a yellow coin with a dollar sign '\$', and a multiplication sign 'x'. This is followed by a grey circle with the letter 'T' and a light blue circle with a hash symbol '#', representing the average number of transactions.

Customer
Value

Average Value
of Sale

Average Number
of Transactions



The diagram illustrates the calculation of Customer Lifetime Value (CLV). On the left, an orange rectangular box contains the letters 'CLV' in white, with a background of gears and a person icon. This is followed by an equals sign. To the right of the equals sign are three elements: a light blue rectangular box containing 'CV' (as described in the first diagram), a multiplication sign 'x', and a teal circle with the letters 'CL' and a pink circle with a clock face, representing the average customer lifespan.

Customer
Lifetime Value

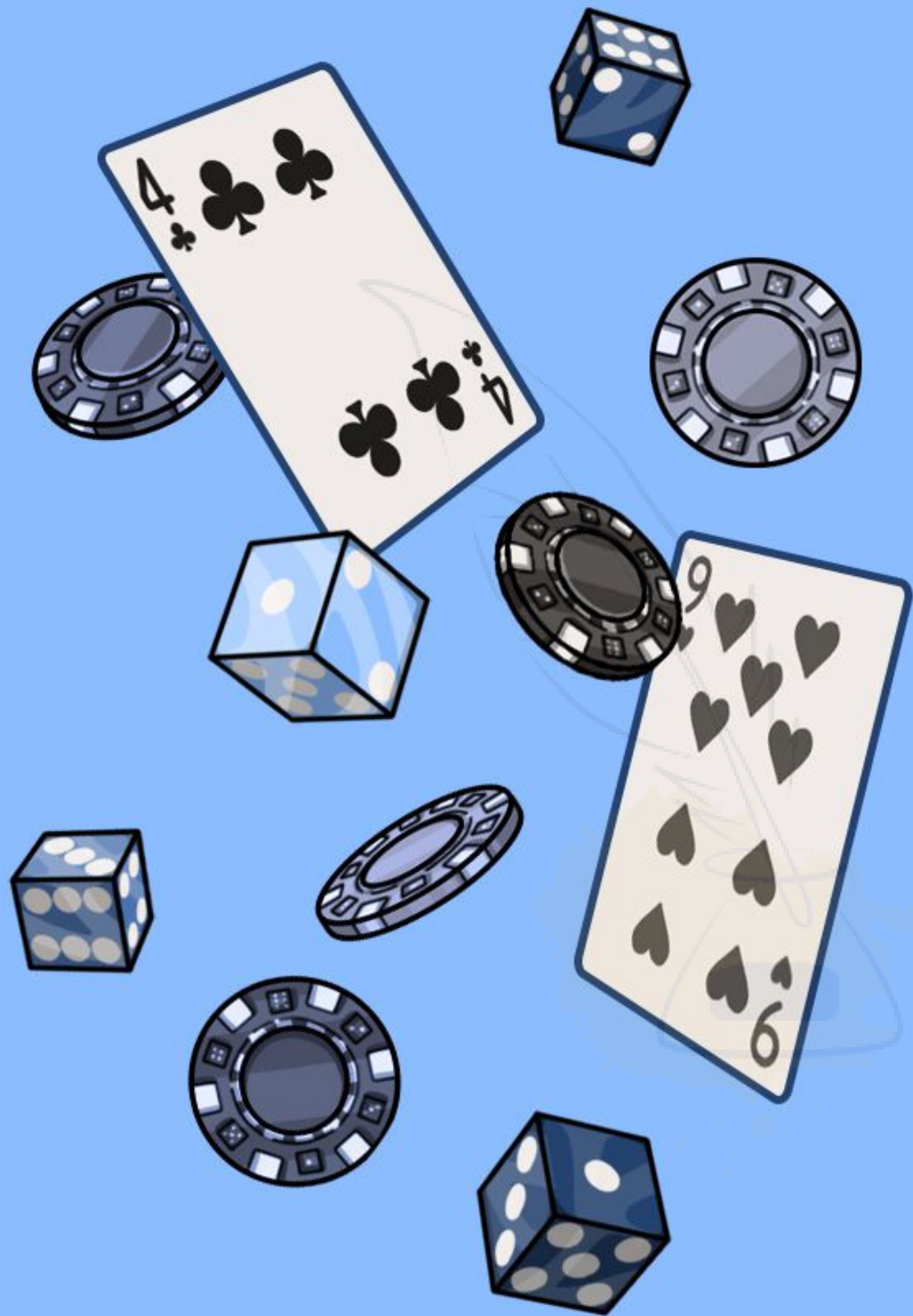
Customer
Value

Average
Customer Lifespan

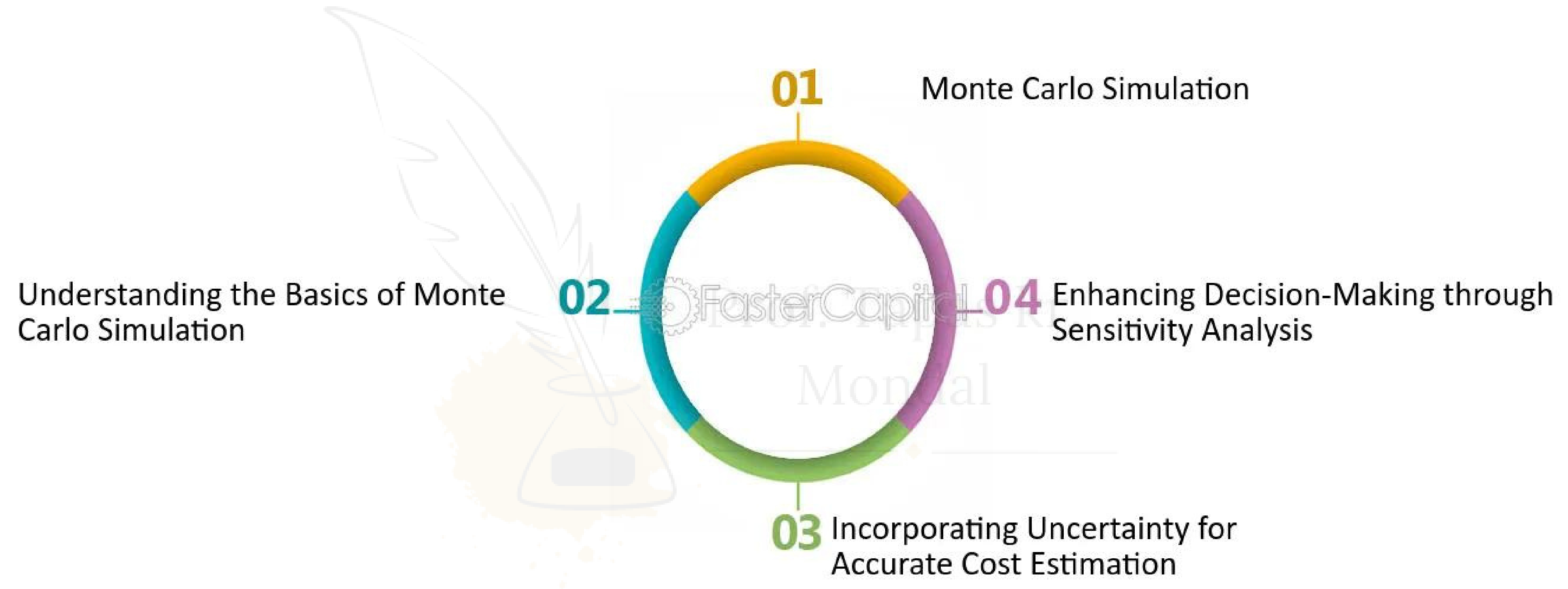
Monte Carlo Simulation

[män-tē 'kär-'lō sim-yə-'lā-shən]

A model used to predict the probability of a variety of outcomes when the potential for random variables is present.



Introduction to Monte Carlo Simulation

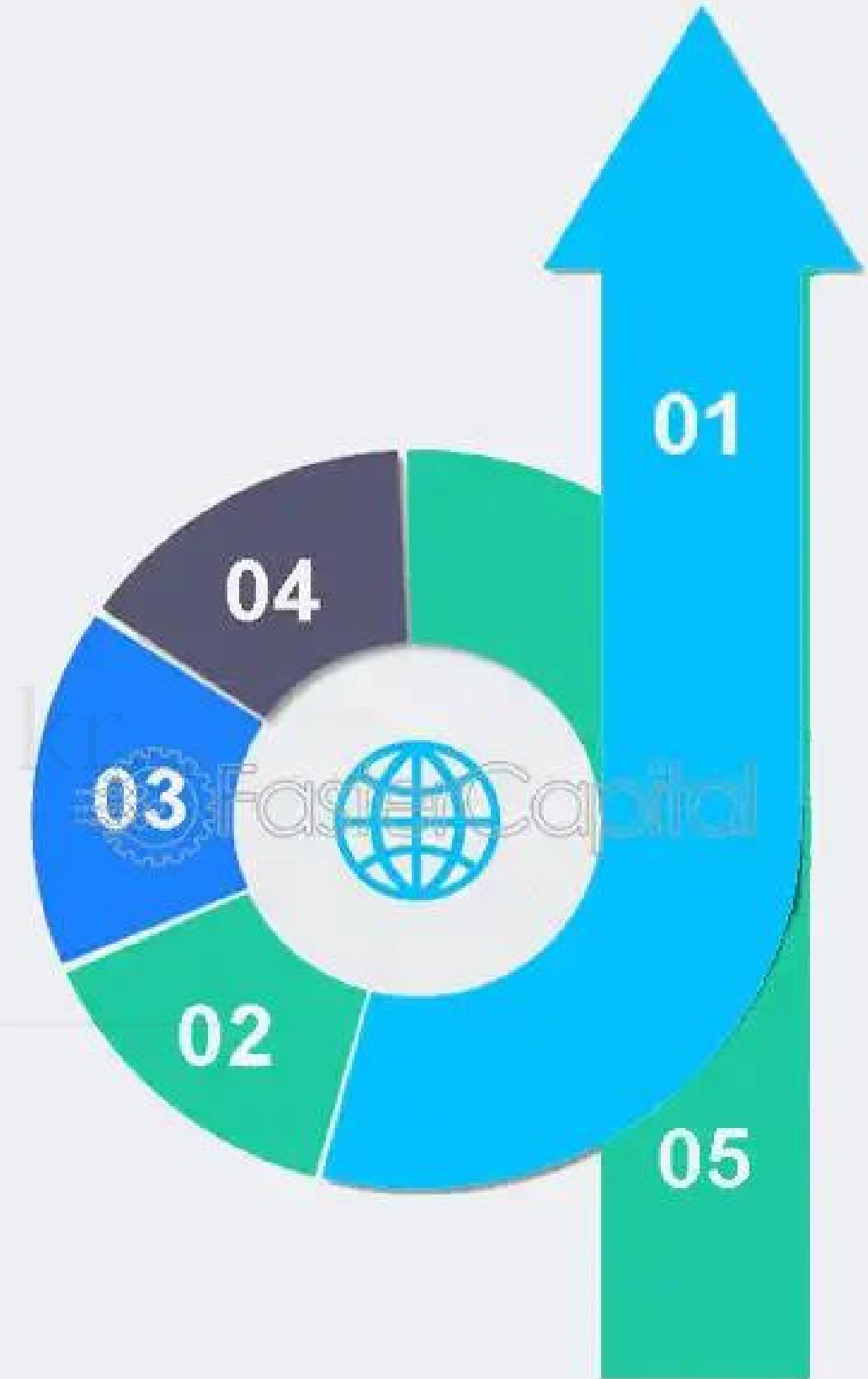


Setting up a Monte Carlo Simulation Model

- 1.** Define the problem
- 2.** Collect data
- 3.** Create probability distributions
- 4.** Run the simulation
- 5.** Analyze the results

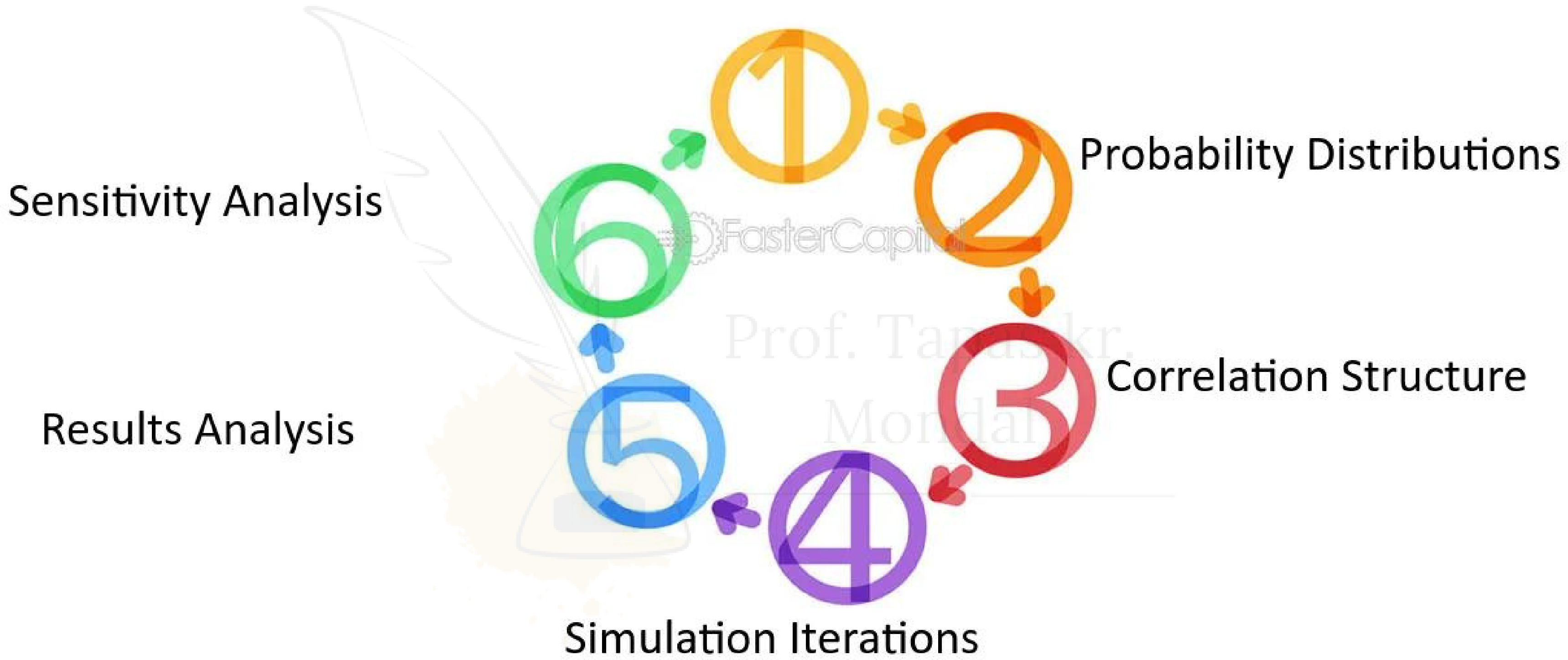


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Key Components of a Monte Carlo Simulation Model

Random Variables



Estimating the parameters for Monte Carlo simulation



1

Estimating stock price - The stock price today is typically known, but for future time steps, it is uncertain

2

Estimating risk-free rate - The risk-free rate is usually estimated using government bonds or other risk-free instruments

3

Estimating volatility - Volatility is the measure of the stock price's variability over time

4

Estimating time horizon - The time horizon is the length of time until the option's expiration

Thank You



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