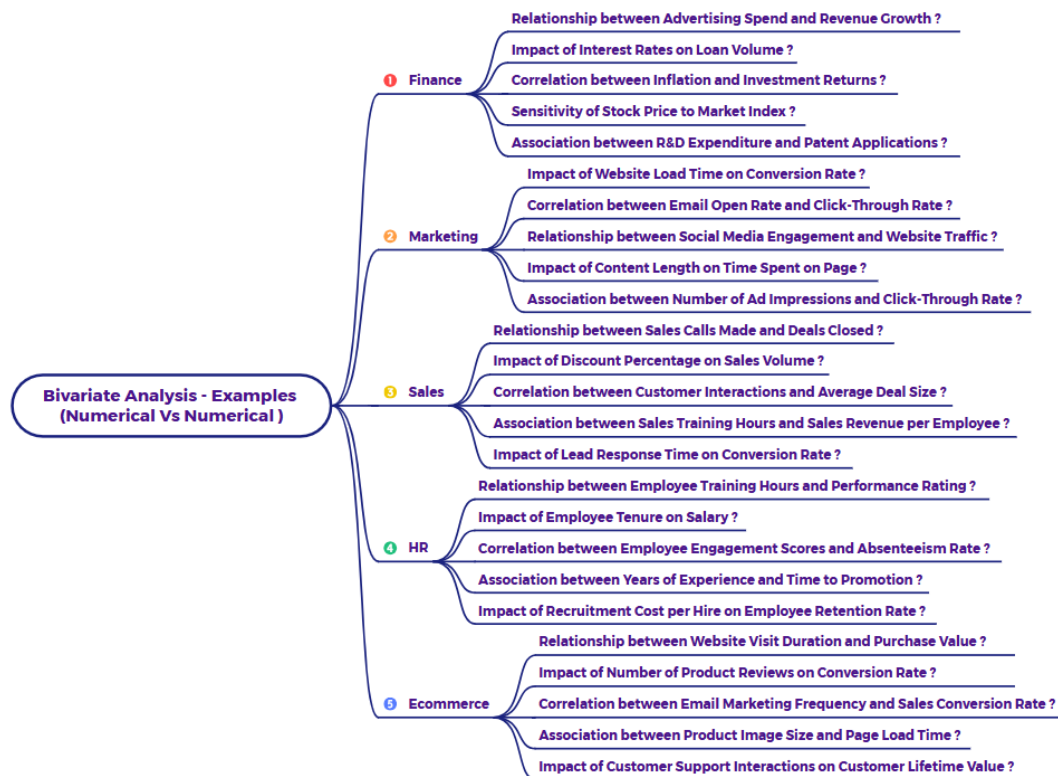# Types of Questions that can be answered by Bivariate analysis - Numerical Vs Numerical variable

1. Finance:

- **Relationship between Advertising Spend and Revenue Growth**: Is there a correlation between the amount spent on advertising campaigns (numerical) and the percentage increase in revenue (numerical)?

- **Impact of Interest Rates on Loan Volume**: How does the prevailing interest rate (numerical) relate to the total volume of loans disbursed (numerical)?

- **Correlation between Inflation and Investment Returns**: Is there a relationship between the inflation rate (numerical) and the returns on specific investment portfolios (numerical)?

- **Sensitivity of Stock Price to Market Index**: How does a company's stock price (numerical) move in relation to changes in a major market index like the S&P 500 (numerical)?

- **Association between R&D Expenditure and Patent Applications:** Is there a correlation between the amount a company invests in research and development (numerical) and the number of patent applications filed (numerical)?

2. Marketing:

- **Impact of Website Load Time on Conversion Rate:** Is there a relationship between the average loading time of a website (numerical) and the percentage of visitors who complete a purchase (numerical)?
- **Correlation between Email Open Rate and Click-Through Rate:** How does the percentage of recipients who open an email campaign (numerical) relate to the percentage who click on a link within the email (numerical)?
- **Relationship between Social Media Engagement and Website Traffic:** Is there a correlation between the number of likes, shares, and comments on social media posts (numerical) and the number of visits to the company website (numerical)?
- **Impact of Content Length on Time Spent on Page:** How does the word count of a blog post or web page (numerical) relate to the average time visitors spend on that page (numerical)?
- **Association between Number of Ad Impressions and Click-Through Rate:** Is there a relationship between the number of times an online advertisement is shown (numerical) and the percentage of times it is clicked (numerical)?

3. Sales:

- **Relationship between Sales Calls Made and Deals Closed:** Is there a correlation between the number of sales calls a representative makes (numerical) and the number of deals they successfully close (numerical)?
- **Impact of Discount Percentage on Sales Volume:** How does the percentage discount offered on a product (numerical) relate to the quantity of that product sold (numerical)?
- **Correlation between Customer Interactions and Average Deal Size:** Is there a relationship between the number of interactions a

salesperson has with a prospect (numerical) and the average value of the deals they close with that prospect (numerical)?

- **Association between Sales Training Hours and Sales Revenue per Employee:** Is there a correlation between the number of hours of sales training an employee receives (numerical) and the total revenue they generate (numerical)?

- **Impact of Lead Response Time on Conversion Rate:** How does the time taken to respond to a sales lead (numerical, e.g., in hours) relate to the percentage of those leads that convert into customers (numerical)?

4. HR (Human Resources):

- **Relationship between Employee Training Hours and Performance Rating:** Is there a correlation between the number of hours an employee spends in training (numerical) and their performance review score (numerical)?

- **Impact of Employee Tenure on Salary:** How does the length of time an employee has been with the company (numerical, e.g., in years) relate to their current salary (numerical)?

- **Correlation between Employee Engagement Scores and Absenteeism Rate:** Is there a relationship between employee engagement survey scores (numerical) and the percentage of workdays employees are absent (numerical)?

- **Association between Years of Experience and Time to Promotion:** Is there a correlation between an employee's total years of professional experience (numerical) and the time it takes for them to get promoted (numerical, e.g., in years)?

- **Impact of Recruitment Cost per Hire on Employee Retention Rate:** How does the amount spent on recruiting a new employee (numerical) relate to the percentage of those employees who stay with the company for more than a year (numerical)?

5. Ecommerce:

- **Relationship between Website Visit Duration and Purchase Value:** Is there a correlation between the average time a visitor spends on

the website (numerical, e.g., in minutes) and the average value of their order (numerical)?

- **Impact of Number of Product Reviews on Conversion Rate**: How does the number of reviews a product has (numerical) relate to the percentage of visitors who view the product and then purchase it (numerical)?

- **Correlation between Email Marketing Frequency and Sales Conversion Rate**: Is there a relationship between the number of marketing emails sent per week (numerical) and the percentage of recipients who make a purchase (numerical)?

- **Association between Product Image Size and Page Load Time**: Is there a correlation between the file size of product images (numerical, e.g., in kilobytes) and the time it takes for the product page to load (numerical, e.g., in seconds)?

- **Impact of Customer Support Interactions on Customer Lifetime Value**: How does the number of customer support interactions a customer has (numerical) relate to their total spending with the company over their relationship (numerical)?