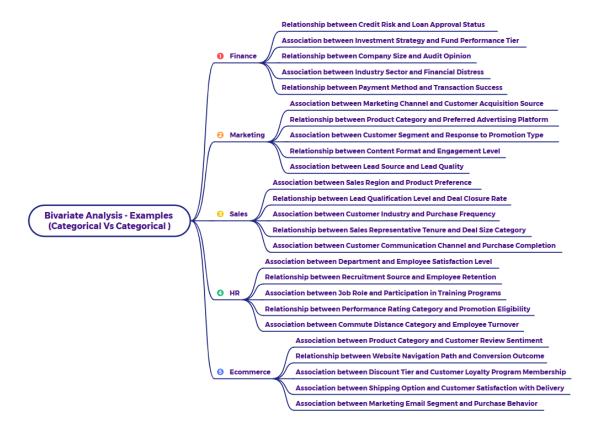# Types of Business Questions that can be answered by Bivariate analysis

1. Finance:

- Relationship between Credit Risk and Loan Approval Status: Is there an association between different credit risk categories (e.g., High, Medium, Low) and the status of a loan application (e.g., Approved, Rejected)?
- Association between Investment Strategy and Fund Performance Tier: Is there a relationship between the investment strategy employed by a fund (e.g., Growth, Value, Index) and its performance tier (e.g., Top Quartile, Second Quartile, Bottom Half)?
- Relationship between Company Size and Audit Opinion: Is there an association between the size of a company (e.g., Small, Medium, Large) and the type of audit opinion received (e.g., Unqualified, Qualified)?
- Association between Industry Sector and Financial Distress: Is there a relationship between the industry sector a company operates in (e.g.,

Technology, Manufacturing, Retail) and its level of financial distress (e.g., High, Medium, Low)?

- Relationship between Payment Method and Transaction Success: Is there an association between the payment method used (e.g., Credit Card, Debit Card, Bank Transfer) and the success status of the transaction (e.g., Successful, Failed)?

2. Marketing:

- Association between Marketing Channel and Customer Acquisition Source: Is there a relationship between the primary marketing channel used (e.g., Social Media, Email, Paid Search) and the initial source through which a customer was acquired (e.g., Website, Referral, Event)?

- Relationship between Product Category and Preferred Advertising Platform: Is there an association between the type of product being marketed (e.g., Electronics, Apparel, Home Goods) and the advertising platform customers recall most (e.g., Facebook, Google, TV)?

- Association between Customer Segment and Response to Promotion Type: Is there a relationship between different customer segments (e.g., Loyal Customers, New Customers, Price-Sensitive) and their likelihood to respond to different types of promotions (e.g., Discount, Free Shipping, Bundle)?

- Relationship between Content Format and Engagement Level: Is there an association between the format of marketing content (e.g., Blog Post, Video, Infographic) and the level of user engagement (e.g., High, Medium, Low)?

- Association between Lead Source and Lead Quality: Is there a relationship between the source of a marketing lead (e.g., Webinar, Whitepaper Download, Contact Form) and the perceived quality of that lead (e.g., High Potential, Low Potential)?

3. Sales:

- Association between Sales Region and Product Preference: Is there a relationship between the geographical sales region (e.g., North, South, East, West) and the preferred product line among customers in that region?

- Relationship between Lead Qualification Level and Deal Closure Rate: Is there an association between the qualification level of a sales lead (e.g., Hot, Warm, Cold) and the likelihood of that lead resulting in a closed deal (e.g., Closed Won, Closed Lost)?
- Association between Customer Industry and Purchase Frequency: Is there a relationship between the industry a customer belongs to (e.g., Healthcare, Education, Finance) and their frequency of making purchases (e.g., High, Medium, Low)?
- Relationship between Sales Representative Tenure and Deal Size Category: Is there an association between the tenure of a sales representative (e.g., New, Experienced, Senior) and the typical size category of the deals they close (e.g., Small, Medium, Large)?
- Association between Customer Communication Channel and Purchase Completion: Is there a relationship between the primary communication channel used with a customer (e.g., Email, Phone, In-Person) and the likelihood of them completing a purchase?

4. HR (Human Resources):

- Association between Department and Employee Satisfaction Level: Is there a relationship between the department an employee works in (e.g., Marketing, Engineering, Sales) and their level of job satisfaction (e.g., High, Medium, Low)?
- Relationship between Recruitment Source and Employee Retention: Is there an association between the source through which an employee was hired (e.g., Referral, Job Board, Agency) and their retention status (e.g., Still Employed, Terminated)?
- Association between Job Role and Participation in Training Programs: Is there a relationship between an employee's job role (e.g., Analyst, Manager, Director) and their participation in different types of training programs (e.g., Technical, Leadership, Soft Skills)?
- Relationship between Performance Rating Category and Promotion Eligibility: Is there an association between an employee's performance rating category (e.g., Exceeds Expectations, Meets Expectations, Needs Improvement) and their eligibility for promotion (e.g., Eligible, Not Eligible)?

- Association between Commute Distance Category and Employee Turnover: Is there a relationship between the category of an employee's commute distance (e.g., Short, Medium, Long) and their likelihood of leaving the company?

5. Ecommerce:

- Association between Product Category and Customer Review Sentiment: Is there a relationship between the category of a product purchased (e.g., Electronics, Clothing, Books) and the overall sentiment of customer reviews (e.g., Positive, Negative, Neutral)?
- Relationship between Website Navigation Path and Conversion Outcome: Is there an association between the sequence of pages a user visits on the website (categorized by common paths) and whether they complete a purchase (e.g., Purchase, No Purchase)?
- Association between Discount Tier and Customer Loyalty Program Membership: Is there a relationship between the discount tier a customer typically receives (e.g., No Discount, Tier 1, Tier 2) and their membership status in the customer loyalty program (e.g., Member, Non-Member)?
- Association between Shipping Option and Customer Satisfaction with Delivery: Is there a relationship between the shipping option selected by a customer (e.g., Standard, Express) and their reported satisfaction level with the delivery process (e.g., High, Medium, Low)?
- Association between Marketing Email Segment and Purchase Behavior: Is there a relationship between the segment of customers receiving a particular marketing email (e.g., High Spenders, New Subscribers, Lapsed Customers) and their likelihood to make a purchase after receiving the email?