IBUS204
BUSINESS RESEARCH

INDIVIDUAL ASSIGNMENT (CLO 3)   **20 MARKS**

CLO3: Utilize critical thinking while conducting business research through the application of different statistical tools.

RUBRICS: The problem-solving Rubric has been uploaded for you on Blackboard.

SUBMISSION DEADLINE on BLACKBOARD: Midnight of Sunday, May 25th, 2025.
After the above date and time, there will be a 10% penalty per each day for late submission.

Individual is highly encouraged to seek my comments on their draft - only one time - via Team/Blackboard before 23rd May 2025. However, individual can use my office hours as well as during classes to ask your questions and clear any doubts you have on this individual assignment.

SUBMISSION GUIDELINES:

Submit a comprehensive report that includes an introduction, brief literature review, methodology, results, discussion, and conclusion sections. The maximum word limit is 2000 words.

Include visual representations of data using appropriate charts, graphs, or tables.

Clearly document the steps taken in data processing and the reasons behind choosing specific statistical tools. Your choices as a researcher should be clearly communicated in your report.

Ensure proper citation of sources and references in the APA format, guidelines for the same have been shared with you earlier in the course.

Please note that the assignment will be screened for plagiarism and AI, as per the ADU OAI principles of academic integrity.

You are expected to apply critical thinking skills in selecting and implementing statistical tools to address a real-world business problem. You are encouraged to analyze data, draw meaningful conclusions, and provide actionable recommendations based on your findings.

Decision-Making of Online Shopping Behaviour: A Statistical Approach

Read the applied research scenario below and related data provided in MS Excel dataset file. You are expected to analyze consumer behavior in online shopping using statistical tools. You will <u>identify key factors influencing online purchase decisions</u> and recommend those to online retailers.

You have been appointed as the leader of a market research team at 4Sight Research and Analytics, to analyse online shopping behaviour of consumers in the UAE. As a researcher, you are playing a role in helping them advise online retail companies' managements in making decisions to improve their business performance given the tough competition in the online retail market and the large number of players that exist.

You are required to do the following:

1. Introduction and Context setting: Provide an overview of online shopping trends and the importance of understanding consumer behavior;

2. Conduct a preliminary literature review among authentic academic sources to understand the need for this study- summary of existing research on online consumer behavior and influencing factors;

3. Define Research Objective/Questions: Clearly articulate at least two research objectives/questions related to the business issue you've identified to study (# <u>refer to the key concepts covered in the data as well</u>). These questions should be specific, measurable, and relevant to this industry.

4. Data preprocessing: Clean and preprocess the data as needed. This may involve handling missing values, outliers, and transforming variables to make the dataset suitable for statistical analysis.

5. Statistical analysis and results: Conduct the <u>descriptive statistics analysis</u> and find the mean, median and standard deviation in the data, as relevant. <u>Apply at least two different statistical tools or techniques covered in the course to analyze the dataset. Examples include correlation analysis, ANOVA, Multiple Linear Regression / ordinal[1] regression testing etc</u>. Ensure that the selected tools align with the nature of your research questions.

6. Interpretation of results and their critical discussion: Interpret the results obtained from your statistical analysis. Discuss how the findings address the research questions and provide insights into the business problem you identified. Critically evaluate the strengths and limitations of the statistical methods used. Discuss potential biases, assumptions, or constraints that may affect the validity of your results. Provide the interpretation of key factors influencing online shopping decisions and potential implications for online retailers.

---

[1] Ordinal regression is a statistical technique that is used to predict behavior of ordinal level dependent variables with a set of independent variables. The dependent variable is the order response category variable, and the independent variable may be categorical or continuous.

7. Recommendations: Based on your analysis, propose recommendations or strategic insights for the management of online retail companies. Consider how your findings could inform decision-making processes and help them improve online shopping experiences. Do look at the market dynamics that can facilitate or cause problems in the implementation of the recommendations.

PLEASE NOTE THE VARIABLES PROVIDED TO YOU IN THE DATASET:

Dataset Overview

The dataset contains hypothetical data on consumer behavior in online shopping, focusing on various factors that might influence purchase decisions. The data includes demographic information, shopping habits, and feedback on different aspects of online shopping.

Variables

1. **Customer_ID:** Unique identifier for each customer.

2. **Age:** Age of the customer.

3. **Gender:** Gender of the customer (1: Male, 2: Female).

4. **Income:** Annual income of the customer (in USD).

5. **Shopping_Frequency:** Average number of online purchases per month.

6. **Average_Spend:** Average amount spent per purchase (in USD).

7. **Device_Used:** Primary device used for online shopping (1: Desktop, 2: Mobile, 3: Tablet).

8. **Website_Ease_of_Use:** Rating of website ease of use (1 to 5 scale).

9. **Delivery_Speed:** Rating of delivery speed (1 to 5 scale).

10. **Product_Variety:** Rating of product variety (1 to 5 scale).

11. **Customer_Service:** Rating of customer service (1 to 5 scale).

12. **Overall_Satisfaction:** Overall satisfaction with online shopping experience (1 to 5 scale).

Note: the 1 to 5 scale indicates 1 being the 'lowest' rating and 5 being the 'highest' rating of the respective variable.

Key aspects of the problem-solving rubric, to attain highest level of achievement, have been provided below for easy reference:

Criteria	Exceeds Standards Criteria	Max Marks
Problems Definition	Identifies clearly the business research problem and underlying issues.	3
Interpretation: Ability to extract quantitative information	Interpretation of quantitative findings contain all critical elements and relevant details and contains no irrelevant data	4
Analysis/Synthesis: Articulate and advocate appropriate applications of quantitative reasoning	Uses correct and complete quantitative analysis to solve problem, using different statistical tools to reach conclusions about potential courses of action.	7
Actions & Recommendations	Provides many alternative solutions and demonstrates the use of integrated knowledge in creative solutions to unfamiliar problems in unfamiliar contexts.	4
Writing and presentation Style	Effectively uses an engaging, professional style and has no errors related to organization, or use of APA citation to support findings	2

FORMAT and STRUCTURE:

FORMAT: Use Times New Roman Font, Size 12, 1.5 inches spacing in the document.