Nanyang Polytechnic
School of Information Technology

Data Analysis & Visualization Assignment 2

Group and Individual work (Total **100 marks**. Weightage **25%**)

Data Sets:
The following datasets are provided:
1. CustomerMaster
2. CustomerEmployment
3. CarInsuranceMaster
4. CarInsuranceClaims

Instructions
1) This assignment constitutes **25%** of your total score for this module.
2) There are 2 parts to this assignment: creation of dashboard and dashboard presentation.
3) You are required to follow the requirements stated in the assignment below.
4) Refer to the rubrics for more information on the marks allocated to each assessment component.

Business Scenario

EzComs Insurance Pte Ltd offers a suite of life and general insurance products including life, car, travel, personal accident and maid insurance. It aims to provides insurance that is world beating in its simplicity and customer focus for connecting people to take control. In a recent strategic roadmap meeting, EzComs's Chief Executive Officer (CEO) has tasked the Head of Analytics to create a dashboard summarizing the overall performance of his Car Insurance department. This dashboard will aid senior management in formulating the strategic directions for Motor Insurance in the next five years.

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IT1164/IT1564/IT1664/IT1864/IT1964
Data Analysis and Visualization

Assignment 2 - Dashboard Presentation
Group and Individual work (Total **100 marks**. Weightage **25%**)

Objective

To create and present a dashboard summarizing the overall performance of Motor Insurance department.

Instructions

1) This section should <u>only be done</u> using **Tableau Desktop**. (You may refer to Practical 1, 3, 6 and 7 for reference)
2) This part of the assignment is to be done in a group with 2 members or up to 3 members for the last group within the module group.

Requirements

1) Use the cleaned and merged datasets released in the NYP LMS (BrightSpace) for your dashboard development. You may use your own cleaned and merged datasets if the datasets provided do not cater for your key focus analysis.
2) Dashboard must be created using Tableau Desktop with <u>interactivity</u> added.
3) Deliverables
   i. Save your Tableau file in Tableau Packaged Workbook (.twb<u>x</u>) format
   ii. Your Tableau file should include cover, dashboard, and summary page of your analysis.
      a. Cover page should contain the key focus analysis chosen by the group and roles/tasks/responsibilities allocated to each team member.
      b. Dashboard
      c. Summary page should contain the key findings that can help management to make better business decision.

4) Final dashboard presentation is in Week 17 during lab/tut hours. Your group will present using Tableau Desktop. PowerPoint slides are not needed. Your tutor will schedule the timing for your group.
   i. Present your team's integrated dashboard(s) to tutor.
   ii. The order of content to be presented: cover page, dashboard, and summary page. You can combine your data visualization into Story and run it to present to tutor.
   iii. Each member will present his/her own work.
   iv. Please keep within the duration allocated to your group.

5) Submit the deliverables to NYP LMS (BrightSpace) by **Week 17 (9 Feb 2024 Friday, 23:59).** Only <u>one member</u> in the group needs to submit the required deliverables.

   Late submission will receive penalty of marks deduction. Submit late after the deadline, minus 10% each day from the total assignment mark. After 1 week, <u>**0**</u> mark is given.

Tasks

Your team needs to study the given datasets and create an interactive dashboard using the 2 key focus of your analysis identified in Section A of your first assignment.

Your dashboard can also cover the followings:

1) Profile of EzComs customers AND the customers who have bought car insurance. You may use data mining method to identify the profile.

2) Overall performance of your Car Insurance department including but not limited to the following: claims, amount collected etc.

3) Any other analysis that you think will deliver useful insights to EzComs Pte Ltd.

- End of Assignment 2 –

Assessment Rubrics

Assessment Component	Developing	Functional	Proficient	Advanced
Data analysis - Individual (40 marks)	**Data Analysis (<24 marks)** Analysis is ill-structured and illogical, providing information / insights that are not helpful to the business.	**Data Analysis (24 to <28 marks)** Analysis is somewhat-structured and logical, providing information / insights that attempt to help the business.	**Data Analysis (28 to <32 marks)** Analysis is structured and mostly logical, providing information / insights that help the business.	**Data Analysis (32 to 40 marks)** Analysis is well-structured and logical, providing information / insights that go beyond touching the surface.
	Analysis provides information that are obvious and provide no insights.	Analysis provides insights about the customers <u>and</u> business.	Analysis provides meaningful insights that can make a difference to the business.	Analysis provides <u>unique</u> insights that can make a big difference to the business.
	No modeling techniques are used.	Attempt to show usage of modelling techniques to provide insights to the business questions. However, the techniques chosen are not quite correct.	Show correct usage of modeling techniques to provide insights to the business questions.	Good use of modeling techniques to provide further insights to the business questions.
Presentation - Individual (20 marks)	**Presentation skills and Q&A (<12 mark)** Articulation is poor.	**Presentation skills and Q&A (12 to <14 marks)** Articulation is confusing at times.	**Presentation skills and Q&A (14 to <16 marks)** Articulation is clear.	**Presentation skills and Q&A (16 to 20 marks)** Articulation is clear with varying tones.
	The presenter is unable to response relevantly to any of the questions.	The presenter has difficulty responding to some questions asked. Answers are relevant but little elaboration is provided.	The presenter is able to respond to questions asked. The answers are relevant and elaborated on.	The presenter is able to respond confidently and completely to questions asked. The answers are relevant, well thought out and elaborated on.
Dashboard - Group (40 marks)	**Dashboard (<24 marks)** Incorrect use of charts to illustration findings. No interaction/incorrect interaction between visualizations is added.	**Dashboard (24 to <28 marks)** Some correct use of charts to illustration findings. Some interaction between visualizations.	**Dashboard (28 to <32 marks)** Correct use of charts to illustration findings. Interaction between visualizations is correctly used.	**Dashboard (32 to 40 marks)** Correct use of charts, interactivity between visualization.
	Student demonstrates very basic understanding of his/her lines of business through the graphs/tables created.	Student demonstrates a somewhat clear understanding of his/her lines of business through the graphs/tables created.	Student demonstrates a clear understanding of his/her lines of business through the graphs/tables created.	Student demonstrates a comprehensive understanding of his/her lines of business through the graphs/tables created.
	Contents (graphs, tables) are laid out poorly so that it is hard to understand the data even with elaboration.	Contents (graphs, tables) are laid out well enough such that with verbal elaboration, it is possible to understand the data.	Contents (graphs, tables) are laid out reasonably well that allows for a somewhat clear understanding.	Contents (graphs, tables) are laid out in a manner that allows for quick and clear understanding.