



**SCHOOL OF INFORMATION SCIENCE  
COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS  
UNIVERSITI TEKNOLOGI MARA  
SHAH ALAM**

**IMS563 – DATA AND INFORMATION VISUALIZATION  
GROUP PROJECT (30%) & PRESENTATION (10%) GUIDELINES**

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**ASSIGNMENT: INFORMATION VISUALIZATION DESIGN & REPORTING**

<b>Topic</b>	The final project will be a team project with an oral presentation. The teams choose an online data collection, obtain this data collection, analyze it, and create a visualization supporting interesting facts found in this data collection.
<b>Descriptions</b>	<p><b>PART I: VISUALIZATION DESIGN (20%)</b></p> <ol style="list-style-type: none"><li>1. Obtain a dataset from this link: <a href="https://www.tableau.com/learn/articles/free-public-data-sets">https://www.tableau.com/learn/articles/free-public-data-sets</a> or other relevant link.</li><li>2. Select one dataset that can fulfil the project requirements.</li><li>3. Design a visualization using the dataset.</li></ol> <p>Requirements of a project:-</p> <ul style="list-style-type: none"><li>• The project should contain at least 4 separate visualizations, all placed in a logical manner.</li><li>• The design must follow good information visualization practices, which should take into account the proper use of visualization components such as color, size, position, shape, label and so on.</li><li>• The visualization should support Shneiderman's key information-seeking tasks, including presenting an overview of the data, the ability to zoom and/or filter, providing details on demand, and showing appropriate relationships among the data.</li></ul>

- All design choices should well-suited for the type and scale of data you represent.
- The visualizations should help the user achieve insight on making the non-visible visible, or showing trends or patterns or outliers or missing information, or by presenting the underlying information in a more understandable way.
- The final product should be of high quality and focused scope. Select a project your team can fully execute in the time you have.

## **PART II: WRITTEN REPORT (10%)**

In the report, students should provide:

### **1) Title Page**

**2) Introduction / Motivation** – Describe your motivation in choosing the dataset.  
*What made you choose the data? Why is your task important? What is the project objective? What goals are you covering?*

**3) Data** – Describe the dataset you have chosen.  
*What is the purpose of the dataset? How many data? What is the dimension of the data? What questions does it answer? Who is the target audience?*

**4) Visualization Methods** – Describe the visualization design  
*What factors that influenced your design? How did you do it? Which methods? Why you choose the visualization components? Which visualization techniques and theoretical principles you applied? The components you used can effectively present information?*

**5) Evaluation/Results** – Describe the results/findings  
*What were the results? How accurate were they? What insights were derived? Examples of output? Anything to demonstrate unique aspects of the approach? What trends or patterns you have discovered? Is there any outliers or missing information?*

	<p><b>6) Recommendations</b> – Describe your recommendations or suggestions to improve the visualization design.</p> <p><b>7) Conclusion</b> – Wrap your critique with a summary of your design and what has been learned from your analysis.</p> <p><b>8) References</b> – Minimum 5 references (APA style).</p> <p><b>PART III: PRESENTATION (10%)</b></p> <p>For the presentation, students will demonstrate the final version of visualization project to the class. This is an opportunity to show how it works and discuss how the team designed and/or built it.</p> <p>Presentation should include:-</p> <ul style="list-style-type: none"> <li>• A brief introduction to the project (i.e.: project motivation, objectives, and goals, target audience)</li> <li>• Provide a general description of the data used.</li> <li>• A discussion of your design process that highlights the key factors, challenges, ideas and insights, from your data exploration, that influenced your design.</li> <li>• The demonstration of your visualization project.</li> <li>• An evaluation of your project, that include improvements that you think would make the visualization more effective.</li> <li>• The duration of the presentation will be 15 minutes: 10 minutes to present and 5 minutes for Q&amp;A session.</li> </ul>
<b>Format</b>	<p>Font: Arial (11)</p> <p>Spacing: 1.5, Justify Text</p> <p>Pages: All pages must be numbered</p> <p>Document format: PDF</p>
<b>Submission/ Presentation Date</b>	Week 13
<b>Submission Link</b>	