

ASSIGNMENT 20%
SEMESTER 2 SESSION 2025

Title:
Name:
Student Id:
Course Code: CCS3133
Course Name: Information Visualization
Lecturer: Assoc. Prof. Ts. Dr. Leelavathi
Date:
Marks:

PLEASE READ ALL INSTRUCTIONS AND INFORMATION CAREFULLY.

This is a group (1 – 2 members) assignment. The work must be submitted as a group. This assignment contributes 20% to your final module mark.

The topics list is given below, each group can choose one topic.

1) Social Media Usage Statistics

Twitter, Instagram, TikTok user growth by region.

2) Electric Vehicle (EV) Market Growth

Number of EVs sold per year globally.

Charging station distribution visualization.

3) Own fitness tracker data visualization.

4) A music listening habits dashboard (Spotify/YouTube Music data).

5) Crime Rates by Region

Visualize crime data (violent crimes, theft, etc.) across different states or countries

Task 1 – Evaluation [50 marks]

The task must be in an article structure with the following requirements. The maximum pages should be **SIX (6)**.

- **Introduction [15 marks]**

Background study of articles on Information visualization (5 marks)

Research Question and Objectives for your topic. (5 marks)

Explain scope and significant of the topic. Cite references wherever possible. (5 marks)

- **Literature Review [10 marks]**

Briefly discuss the body of literature that is used to motivate the research. You will need to review some of the key articles referenced by the authors. (5 marks)

Identify the gap in the prior literature that the selected article addresses. (3 marks)

Perform a literature search to determine if there are any relevant articles that have not been cited by the authors. (2 marks)

- **Methodology [10 marks]**

Discuss the methodology used for the study. (5 marks)

Design the methodology that will need to from your perspective. (5 marks)

- **Contributions [10 marks]**

Summarize the significant results and contributions made by the authors. (5 marks)

Identify limitations of the article and formulate them as potential research questions.

(5 marks)

- **References [5 marks]**

At least 15 references with APA format should be include with citation. (5 marks)

Task 2 – Evaluation [40 marks]

Your task is to Design and implement a real-time dashboard that visualizes the task.

The task must be in detail with the following requirements.

1. Introduction

Briefly introduce the project is its importance.

2. Project Objectives

List the specific goals of the project. Example:

- Analyze data.

- Identify disparities.
- Create interactive dashboards for exploration.

3. Dataset Description

Describe:

- Source of the dataset.
- Number of records.
- Key fields (columns).

(Tip: Insert a small table showing sample data here!)

4. Tools and Technologies

List the tools you used:

- Tableau Public

5. Methodology

Step-by-step how you handled the project:

- Data cleaning
- Preprocessing
- Exploratory analysis
- Visualization
- Dashboard creation

(Use a simple flowchart here to make it more visual!)

6. Visualizations and Analysis

Here you insert your **screenshots** and **explanations**.

For each visualization, include:

- Title of visualization
- Screenshot/image
- Short analysis (2-4 lines)

Example:

(Insert graph screenshot here)

Analysis

7. Challenges and Solutions

Explain difficulties faced (missing data, tool problems) and how you solved them.

8. Conclusions and Future Work

Summarize the insights you found and suggest how the project could be expanded.

9. References

- Link to dataset.
- Research papers/articles used

10. Appendix

Include full-size images of your dashboards and extra charts if needed.