CSCE 5320 Scientific Data Visualization
ICE-7

Common Visualization Idioms

1. **(25 points)**

   Download the Iris data and create a reusable scatter plot. Submit the VizHub link of your code.

   - Create a reusable scatter plot for the Iris Data. Please differentiate the three iris species by color OR by shape. Submit the screenshots of your code (commented properly) with an explanation and provide the VizHub link to your code.
   - Analyze the chart: describe how different iris species distributed on your chart.
   - Explain the reason why we need to build a reusable scatter plot for the Iris data.

2. **(25 points)**

   You can use the csv dataset from ICE-6 or create another dataset which contains quantitative value.

   - Create a Pie Chart (with labels) with d3.js. Submit the screenshots of your code (commented properly) with an explanation and provide the VizHub link to your code.
   - Display the legend icons next to the chart.
   - Analyze the chart: provide explanation on the visualization. What are the pros and cons of using pie chart on this dataset?

3. **(25 points)**

   You can use the csv dataset from ICE-6 or create another dataset which contains quantitative value.

   - Create a line Chart with d3.js. Submit the screenshots of your code (commented properly) with an explanation and provide the VizHub link to your code.

- Add labels for x-axis and y-axis for the line chart.
- Analyze the chart: provide explanation on the visualization. What are the pros and cons of using line chart on this dataset?

4. **(25 points)**

   You can use the same dataset in Question 3 or create another dataset which contains quantitative value.

   - Create an area chart with d3.js. (Based on your line chart). Submit the screenshots of your code (commented properly) with an explanation and provide the VizHub link to your code.
   - Add labels for x-axis and y-axis for the area chart.
   - Analyze the chart: provide explanation on the visualization. What are the differences between area chart and line chart on this dataset?

Rubric ICE7

Q1: (25 pts)

Criteria	Ratings		Pts
1.1) The graphic is posted to VizHub and runs without errors. Screenshots of Code is provided, and the code should be properly commented with an explanation.	**15 pts**	**0 pts**	10 for the scatter plot chart 5 pts for code screenshots and code explanation
	Full Marks	**No Marks**	
1.2) The answer analyzes the chart and provide explanation.	**5 pts**	**0 pts**	5 pts for analyze the chart
	Full Marks	**No Marks**	
1.3) The answer provides sufficient explanation on the questions	**5 pts**	**0 pts**	5 pts for answering the question
	Full Marks	**No Marks**	

Q2: Pie chart (25 pts)

Criteria	Ratings		Pts
2.1) The graphic is posted to VizHub and runs without errors. Screenshots of Code is provided, and the code should be properly commented with an explanation.	**10 pts**	**0 pts**	5 pts for pie chart 5 pts for code screenshots and code explanation
	Full Marks	**No Marks**	
2.2) The webpage contains legends/icons which match the chart.	**5 pts**	**0 pts**	5 pts for legends
	Full Marks	**No Marks**	
2.3) The answer analyzes the chart and provide sufficient explanation on the question.	**10 pts**	**0 pts**	5 pts for explanation on the chart 5 pts for pros and cons
	Full Marks	**No Marks**	

Q3: Line chart (25 pts)

Criteria	Ratings		Pts
3.1) The graphic is posted to VizHub and runs without errors. Screenshots of Code is provided, and the code should be properly commented with an explanation.	**5 pts**	**0 pts**	5 pts for line chart 5 pts for code screenshots and code explanation
	Full Marks	**No Marks**	
3.2) The chart contains labels for x-axis and y-axis.	**5 pts**	**0 pts**	5 pts for labels
	Full Marks	**No Marks**	
3.3) The answer provides sufficient explanation on the chart and answer the questions.	**10 pts**	**0 pts**	5 pts for explanation on the chart 5 pts for pros and cons
	Full Marks	**No Marks**	

Q4: Area chart (25 pts)

Criteria	Ratings		Pts
4.1) The graphic is posted to VizHub and runs without errors. Screenshots of Code is provided, and the code should be properly commented with an explanation.	**10 pts**	**0 pts**	5 pts for chart 5 pts for code screenshots and code explanation
	Full Marks	**No Marks**	
4.2) The chart contains labels for x-axis and y-axis.	**5 pts**	**0 pts**	5 pts for labels
	Full Marks	**No Marks**	
4.3) The answer provides sufficient explanation on the chart and answer the questions.	**10 pts**	**0 pts**	5 pts for explanation on the chart 5 pts for answering the question
	Full Marks	**No Marks**	

Plagiarism Rules：

• No scores to the questions which are completely plagiarized i.e., same screenshots captured, or almost same wordings for an explanation.

• If the similarity score for the explanation part (mainly analysis) is >= 50% and is plagiarized with other students or any source, deduct 30-50% off from the obtained score.

• If it is between 30-50%, deduct 20-30% from the obtained score.

• For all others, it should be according to the

ICE Submission Guidelines

1. ICE Submission is individual.
2. ICE code (if there is any) has to be properly commented.
3. The documentation should include the screenshots of your code/results.
4. Provide the explanation of the exercise as per your understanding.
5. The similarity score for your document should be less than 15%.
6. Submit the documentation (.pdf/.doc) with visual images of the data with explanation.
7. Submission after the deadline is considered as late submission.