San José State University
Department of Computer Engineering

CMPE 280
Section 2
Web UI Design and Development
Spring 2020
Instructor: Ron Mak

Assignment #6

Assigned: Tuesday, March 26
Due: Monday, April 20 at 11:59 pm
            Team assignment, 100 points max

Information dashboard
Create the first draft of an information dashboard for your project.

Examine the dataset you have chosen for your project. What are the **KPIs** (key
performance indicators) in your data? What is important for a viewer to **see at a glance**
in order to **gain situational awareness** and to **decide what action** to take?

Charts
Include at least four charts. You choose which type of chart is appropriate for its KPI.
For this assignment, your charts do not need to update in real time.

Good design principles
Use good design principles for the layout of your dashboard. All the charts must fit on
one screen. Is there something most important for the user to see? If so, how did you
direct the user's eyes to it?

Use good design principles for each chart. Is it the appropriate chart type? Should the
chart highlight something?

How well did you use color and other preattentive attributes in the design of your
dashboard and the individual charts?

Data sources for the charts
Data for each chart should be obtained from your database on the server side.

Chart generation tools
There are several popular JavaScript libraries for generating charts. Google "JavaScript chart generation tools" to find them. Just as you did for the jQuery UI library, your website downloads your chosen libraries, and your JavaScript code calls the APIs to create the charts. Popular charting software include D3.js, Highcharts, Google Charts, and Tableau Public.

Report
In a short report, discuss

- What are the KPIs of your dataset?
- For whom is your dashboard designed? How does your dashboard increase the viewer's situational awareness? What action will your dashboard encourage?
- What good dashboard design principles did you use?
- What good chart design principles did you use?
- Did you use preattentive attributes well?

What to turn in
Submit to Canvas: **Assignment #6**.

- Your source files.
- A screen shot of your dashboard.
- If it's possible for the ISA to run your program, include instructions.
- Your report.

Rubric
Your work will be graded according to these criteria:

Criteria	Max points
• **Information dashboard**	• **60**
○ Well-designed dashboard layout in one screen.	○ 20
○ At least four well-designed charts for selected KPIs.	○ 40
• **Report**	• **40**
○ How does each KPI improve situational awareness?	○ 10
○ Good dashboard design principles?	○ 10
○ Good chart design principles?	○ 10
○ Good use of preattentive attributes?	○ 10