# Visualization



## Assignment 2: Build your Analytics dashboard (For data click here)

**Opened:** Wednesday, 24 November 2021, 12:00 AM
**Due:** Wednesday, 8 December 2021, 12:00 AM

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**Task: Build your Analytics dashboard**

**Total Points: 20**

- Use the dashboard, dashboardPage() layout that is discussed in the class. The template is shared in the moodle.
- On the sidebar; each menu will correspond to the problem given below.
- Each problem has two sub-task. Present each sub-task in a tab.

**Problem 1: Build Simulator**

Build a simulator for checking Central Limit Theorem. The simulator will assume the underlying population distribution as Gamma or Uniform. Use the first tab for Gamma distribution and the second tab for the Uniform distribution.

The simulator will have the following inputs by the user:

(i) Simulation Size (default 1000)

(ii) Sample Size (default 30)

(iii) Mean of the population (default 20)

(iv) standard deviation of the population ( default 5)

The parameters for Gamma or Uniform should be calculated from the provided mean or variance in the backend server.

**Hint:** You can use the following transformation for Uniform distribution:

Min = mean - sd*sqrt(3)

Max = mean + sd*sqrt(3)

Use "**Action Button**" and the following three components should be rendered in the output.

(i) Histogram of sample means

(ii) Q-Q plot of the sample means

(iii) Kolmogorv-Smironov's test for normality

Points: Each subtask is worth 5 points. Total 10 points.

**Problem 2: Data Visualisation**

Build a data visualization dashboard using "german_credit_data.csv" provided in the moodle. You have to solve two tasks. Each task should be presented in a separate tab.

**Task 1:** (**4 points**) The user should select any one of the categorical variables (from a dropdown list) out of five variables. Then render a "pie chart" and "barplot" for the selected categorical variable

**Task 2: (6 points)**

- The user has to select any one of the numeric variables (from a dropdown list) out of three variables.
- Then she/he has to select any one of the categorical variables (from a dropdown list) out of five variables.
- You have to render a side-by-side boxplot for the chosen numeric variable against the chosen categorical variable

**Note:** Keep the dataset in the same project folder where your app.R is created. While deploying your app, select both app.R and datasets and then publish.

**Finally, once you publish the dashboard; submit the dashboard's public link, which Shreyan or Sourish can check.**

**Also, submit the "app.R" file as well.**

german_credit_data.csv 24 November 2021, 11:44 PM

## Submission status

| | |
|---|---|
| **Submission status** | Submitted for grading |
| **Grading status** | Not graded |
| **Time remaining** | Assignment was submitted 1 day 6 hours early |
| **Last modified** | Monday, 6 December 2021, 5:40 PM |
| **File submissions** | Analytics_Dashboard.rar 6 December 2021, 5:40 PM |
| **Submission comments** | Comments (0) |

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R code for dashboard template (click here) ►