

Read this first

This project is being offered to MIS2402 students who are looking to earn MIS professional achievement points. This project is not extra credit. Participation in the project will not improve or reduce your grade in MIS2402. This project is optional. You don't need to do this project if you don't want to. The incentive for doing this project is MIS PRO points, and the joy of learning/applying a new skill: programming.

If you take advantage of this opportunity, you may earn 0 or 50 portfolio points based on my evaluation of your work.

The project

As you have seen in class, there are web APIs available to programmers that will allow them to perform a variety of tasks and to access a wide variety of data sets.

Your PRO Point project is to:

- Identify one or two existing sources of JSON data from <https://catalog.data.gov/dataset>
- Examine your data using JavaScript and generate at least two summary statistics. For example: two averages, one for each of two populations.
- Construct a relevant hypothesis (you do not need to test your hypothesis!)
- Explain why your investigation is interesting. How would a correct and thorough test of the hypothesis could potentially benefit business and/or society.

Constraints:

- Unless otherwise permitted by the instructor, students should choose from the many data sets found here: <https://catalog.data.gov/dataset>
- Students are to work with JSON data sources. No other data format should be used.
- This is an individual assignment. Not a group project or a team project.
- Students are permitted to reference, edit, and/or adapt prior class work.
- Students are to use only the technologies and techniques taught in the class. No additional libraries or frameworks are to be used. Students should limit themselves to the subsets of JavaScript, jQuery, CSS, and HTML language elements we have covered this semester. Students who disregard this constraint will not receive PRO points.
- There are thousands of data sets available. Students should try to choose a data set that is unique and distinct from what other students in the class are using.
- You **may not** use COVID data because that idea is used as an example later in this document. Students should think beyond this obvious example, and come up with a more original idea.

Instructions

As we have done in class, students should:

1. Create a web page with a button and an informative heading tag.
2. Clicking on the button will call two supporting functions.
3. Each function will retrieve data from a JSON data source, and iterate through it, to determine an average. The average is then displayed on the web page.
4. On that web page, also provide text in one or more paragraph tags stating your hypothesis, and why consideration of your hypothesis is relevant.
5. Upload your webpage to misdemo.temple.edu.
6. Turn in the URL to your work on canvas.

A Hypothetical Example

- The student found a data set called “Provisional COVID-19 Deaths by HHS Region, Race, and Age”
- It’s URL is: <https://data.cdc.gov/api/views/tpcp-uiv5/rows.json?accessType=DOWNLOAD>
- The student makes (or edits) a simple HTML page with a button. Clicking on the button calls two functions:
 - The first function iterates through the data and calculates the COVID-19 mortality rate for California is 0.05 deaths per 100k people. This answer is reported on the HTML page.
 - The first function iterates through the data and calculates the COVID-19 mortality rate for Texas is 0.03 deaths per 100k people. This answer is reported on the HTML page.
- Also on the HTML page, the student writes a hypothesis like this one:

“Responses to COVID-19 have varied from state to state, with some states imposing more extreme quarantine measures than others. My hypothesis is that the strict enforcement of quarantine policies resulted in notably different mortality rates.

Examining this hypothesis is beneficial to society. In the event of a future widespread viral outbreak, research using this hypothesis and any related findings can help inform and guide future decision makers.
- The student does not need to test the hypothesis!
- The student uploads their work to misdemo.temple.edu and turns in their URL on canvas.

Turning in your work

Upload your PRO point work to misdemo, and turn in the URL to your work on Canvas. Submissions will be due on Friday 4/26/2024 at 11:59 pm