CSC 301, Final Project
Spring 2020

Final Project Options (with ideas – you may need to do a little more to meet all requirements; see rubric)

1. **Develop a Chrome browser web browser extension that adds functionality to one or more web pages.**

    a. An extension that informs you if I've updated the course page (https://gdancik.github.io/CSC-301/), and alerts the user if there are any assignments due within the next week

    b. An extension that color-codes answers on Stack Overflow (for example, the accepted answer is highlighted in yellow).

    c. A dictionary extension using the WordsAPI: https://www.wordsapi.com/. From any page, a user can double-click a word and get the definition of a word (for simplicity, could be limited to specific elements, like paragraphs).

2. **Develop a web scraper or use a web page's application programming interface (API) to provide a service or to answer a question of interest.**

    a. Eastern calendar lookup #1: Display all events for the current month (or for a month entered by the user) from Eastern's academic calendar: https://www.easternct.edu/academics/academic-calendar/index.html

    b. Allow the user to enter a time for one of their courses (such as MWF, 11- 11:50), and output their final exam time period from https://www.easternct.edu/registrar/final-examinations.html

    c. Look at the top 50 internet sites and graph the top 5 sites based on daily time, daily page views, etc. from https://www.alexa.com/topsites

3. **Develop an R/Shiny application for visualizing or analyzing data that is read from a local or remote file, or obtained through web scraping or an API.**

    a. COVID-19 Shiny application: Bar charts or maps showing COVID infections frequencies across locations.
        i. COVID-19 data library (https://cran.r-project.org/web/packages/COVID19/index.html)
        ii. COVID Shiny application: https://shiny.rstudio.com/gallery/covid19-tracker.html

    b. Visualization of a movie dataset (such as https://www.kaggle.com/rounakbanik/the-movies-dataset; free registration required). Allow a user to select a movie and display the rating and other movie information, as well as summarize movies graphically (showing budget vs. revenue for a given year, bar graph showing proportions of categories for the given year).