Lab Exercise

GEOG 489 Programming for GIS **Spatial Data Manipulation: Raster**
Lab 3

Due: March 3rd, 11:59:59 PM
Grading: 5 points + 1 extra point
Late penalty: 1 point subtraction per day (No points after 5 days)

Introduction
In this lab, you will analyze the impact of hurricane Harvey, which was happened in August 2017 in Texas. You will find that most of the tasks were covered in the lecture, and it is a reproduction of the tasks. The differences are the study area (Houston instead of Champaign), the index (NDWI [Normalized Difference Water Index] instead of NDVI [Normalized Difference Vegetation Index]), and the data source (Sentinel 2 instead of Landsat 8).

Things to be submitted: **ONE** Jupyter notebook (GEOG489_Lab3_[YOUR_NET_ID].ipynb).

Tasks

1. Launch CyberGISX (https://cybergisxhub.cigi.illinois.edu/) and create an empty Jupyter notebook (or you can reuse other notebooks created in earlier labs).

2. Copy and paste (or type) the following code into the cell you just created. This will download the lab materials from the GitHub repository to your CyberGISX environment.
   If you want to create a new cell, you can press 'b' on your keyboard or click Insert -> Insert Cell Below on the menu.

   ```
   !svn checkout https://github.com/jparkgeo/GEOG489/trunk/Labs/Lab3
   ```

3. Navigate to the root folder of your CyberGISX environment. You will see a folder named 'Lab3'. Go inside of the folder and open 'Lab3_spatial_data_manipulation_raster.ipynb'.

4. Finish the tasks described in the notebook and save the notebook in your local directory for submission.
   Name schema: 'GEOG489_Lab3_[YOUR_NET_ID].ipynb'

Done!! Please submit the deliverables to learn.illinois.edu.