Lab Exercise

GEOG 489 Programming for GIS **Spatial Autocorrelation**
Lab 5

Due: March 31st, 11:59:59 PM
Grading: 5 points
Late penalty: 1 point subtraction per day (No points after 5 days)

Introduction
In this lab, you will investigate how the crimes in the city of Chicago are spatially autocorrelated with Global and Local Moran's I. In addition, you will be asked to write a code to calculate distance decay based on Gaussian probability distribution. It will replace the default distance decay function (Power-law probability distribution) when calculating Global and Local Moran's I.

Things to be submitted: **ONE** Jupyter notebook (GEOG489_Lab5_[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/Lab5
   ```

3. Navigate to the root folder of your CyberGISX environment. You will see a folder named 'Lab5'. Go inside of the folder and open 'Lab5_Spatial_Autocorrelation.ipynb'.

4. Finish the tasks described in the notebook and save the notebook in your local directory for submission.
   Name schema: 'GEOG489_Lab5_[YOUR_NET_ID].ipynb'

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