Geography 378: Introduction to Geocomputing
Lab 8: ArcPy Geoprocessing & Jupyter Notebook

Assigned: 12/6
Due: 12/17
15 points

Hand-in

- If you are using Jupyter Notebook to finish the task, please collect your answers in a single *.ipynb* file (Notebook) called **lab8_yourname.ipynb;** Or if you are using ArcPy & ModelBuilder to finish the task, please export (and edit) the script from your customized toolbox with the ModulBuilder workflow and add your comments in the submitting script (**lab8_yourname.py**). Notice that you only need to submit either one (**.ipynb or .py**).
- A **PDF** file contains the final choropleth style map (color shaded).
- Submit the files to the assignment folder called "Lab 8".
- Include appropriate comments in your script to explain what each line or block of code accomplishes. **You must comment your code for full credit.**

Lab Task

(15 pts) Download the past 7 days global earthquake events on Earth (https://earthquake.usgs.gov/earthquakes/feed/v1.0/csv.php) as an *earthquakes.csv* file. Write a script to add the CSV data to a map layer in ArcGIS and spatially join the event points to the world country polygons (http://www.naturalearthdata.com/http//www.naturalearthdata.com/download/110m/cultural/ne_110m_admin_0_countries_lakes.zip). Finally create a choropleth map (with color shaded polygons) that shows the frequency of M3.0+ Earthquakes (magnitude>=3.0) happened in each country in the past 7 days. Don't forget adding the Legend; otherwise the map colors will make no sense to the reader.