METRIC Client Exercise

Task 1: Explore a dataset

Step 1: Load the dataset in

- After you login, **go to the Add Data View** in the application
- Load the Mammography Presevalence dataset into the project by **right-clicking the dataset in the view and choosing to add it to the project**. Note that the dataset will appear in the project view on the right of the Metric application when loading is complete
- View the data of this dataset by **Right-clicking the dataset name** in the Project View and choosing to **add to map**. You will have to **move to the View Results View** and **select the Table visualization** to see the data.
- **Right-click the dataset name** in the Project View and choose to **add it to a map**. Color the map by prevalence_2000_2003. Low values are shown in light blue. High values are shown in dark blue. You can click on a county to see the data from that county.
- Where in Michigan have the fewest people been to a mammography? Did this change from the 2000-2003 period to the 2008-2010 period? Note: to change the map, it is recommended to r**emove the previous map layer and add the dataset again as a new layer**.

Step 2: Calculate the index for Michigan

- Go to the Choose Index View. Select the Distance to Mammography Clinic index.
- Go to the Add Data View. Load the Breast Cancer Patients dataset into the project by **right-clicking the dataset in the view and choosing to add it to the project**. This dataset has the residences of breast cancer patients although the data has noise added to change their residence locations slightly to ensure confidentiality. **Repeat the steps to load a dataset for the Mammography Clinics US** dataset. This dataset contains the locations of mammography clinics in Michigan at this current time.
- **Go the Specify Index View**. **Fill out the parameters** for calculating the index (use a N of 1 nearest clinic). **Click the calculate button**. The result object will be created and listed in the Project View on the right when the analysis is finished.
- Where are values of index high? Where are values low? Note: it may take a little time to move to the View Results View after calculating the index as it creates the visualizations for the first time.
- Add the Mammography Clinics dataset to the map (color by “NONE”). Do the index values follow the clinic locations?

Step 3: Evaluate the index for Michigan

- Begin to explore the relationship of the index value with correlating variables.
- **Create a scattergram of late stage diagnosis as a function of the index value**. Does the index seem to predict at what stage of breast cancer patients will diagnosed?
- Explore the relationship with the index and some other explanatory variables.

Step 4: Compare with other indices

- Calculate the index again with the number of nearest clinics as 3.
- How do the results change?
- Which index do you feel might be a better measure of clinic availability?
- How does this new index correlate with other variables?
- Outside of the metric software, measures of clinic availability were calculated and are in the dataset as the spatial_accessibility1, spatial_accessibility2 and spatial_accessibility3 variables. How do the indices you calculated relate to these other measures?