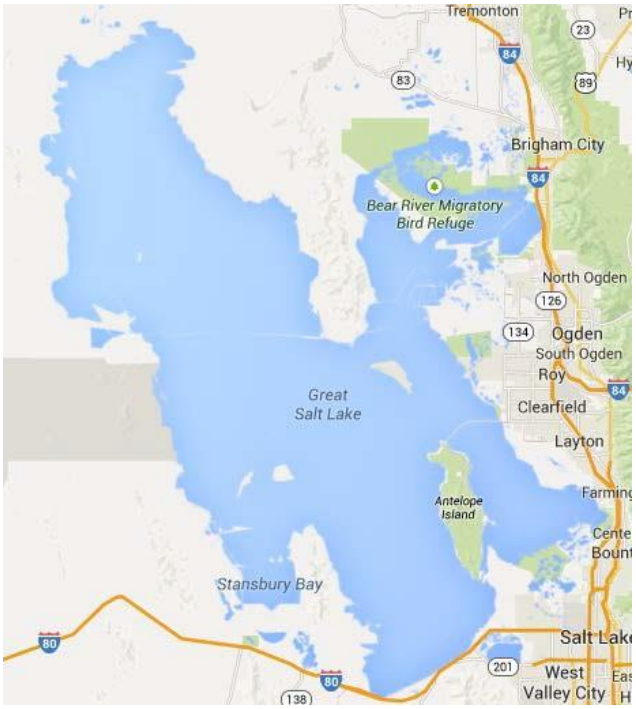
GEOG 1180 Introduction to Geo-Programming

Assignment 8 Shape and Minimum Bounding Rectangles



Compactness is an important quality to measure in a shape, and the minimum bounding rectangle (MBR) is an important way to approximate the boundary (or footprint) of a complex polygon. The MBR is often used to define a study area boundary. In this assignment, we will use the Great Salt Lake as an example and calculate the compactness indices and minimum boundary rectangle of the lake.

In the "Assignment8.py" file, the coordinates of the Great Salt Lake have been provided in the list "lake". The format of the data is "[(x, y)…]". The unit is feet.

1. Please follow the instructions in "Assignment8.py" to calculate the compactness ratio and P2A of the Great Salt Lake, and print out the results.

2. Please follow the instructions in "Assignment8.py" to calculate (xmin, ymin) and (xmax, ymax) of the minimum boundary rectangle of the Great Salt Lake, and print out the result.

Please submit a python script named "Assignment8.py" in Canvas.