WATER BODY DETECTION

Saeed Patel and Saad Mahmood

CS 495

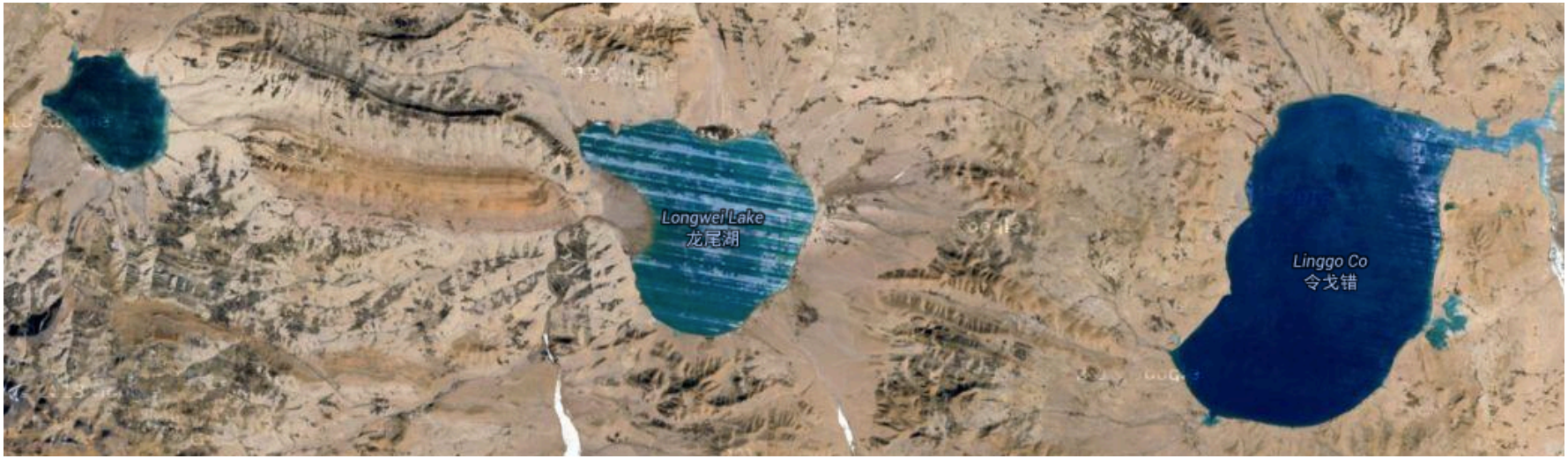
March 27, 2014

Objectives

- First find the water body in the image
- Remove all the area outside water bodies by masking it with black (zeros)
- Convert the image to binary and put a bounding box around the water bodies using connected component analysis

Approach

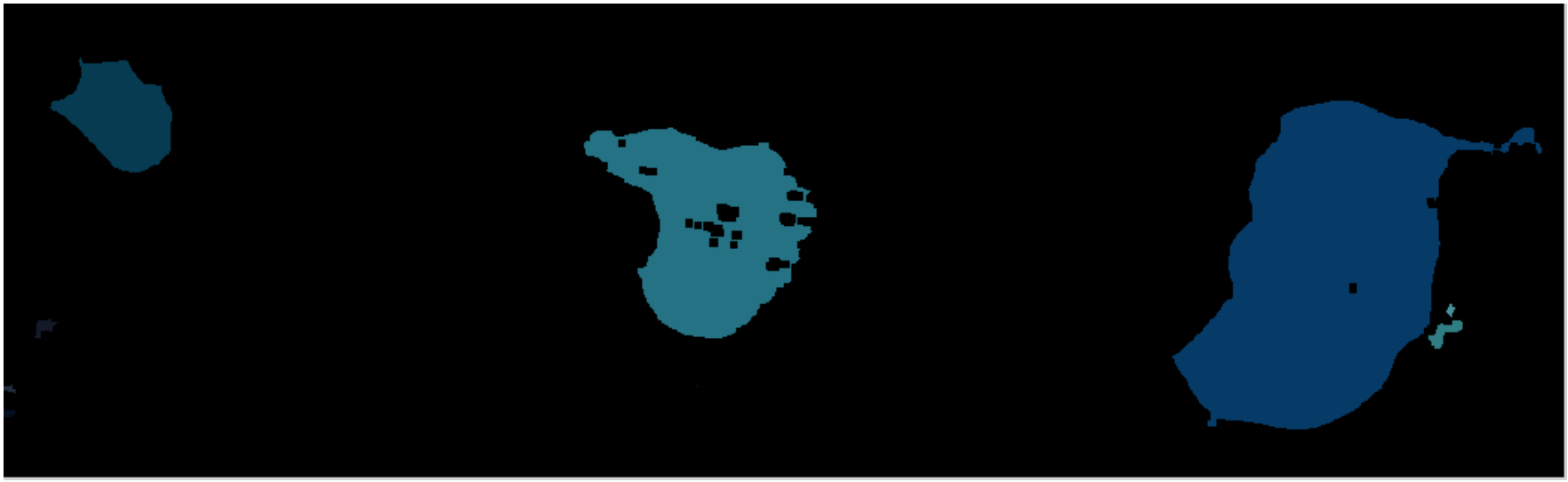
- Detected the water bodies with color detection using Hue, Saturation, Value (HSV)
- Original Image:



Intermediate Results

- Detected the water bodies, and removed all area outside the water bodies

- Intermediate Result: Detection and Isolation



Intermediate Results (cont'd)

- Converted the image to binary and filled most of the inner pixels using image dilation

- Intermediate Results: Binary Conversion and Image Dilation

Final Result

- Used Bounding Box characteristics by giving starting and ending points
- Final Result: Bounding Box Using Connected Components