INTRODUCTION TO REMOTE SENSING

LAB 2: IMAGE EXPLORATION AND PROCESSING

NAME: MST SANJIDA ALAM

Part-1

Link:

https://code.earthengine.google.com/88a14a8bc1fdb470b8424e1cd01577c9

a) Check the metadata and specify what the values in the image represent.

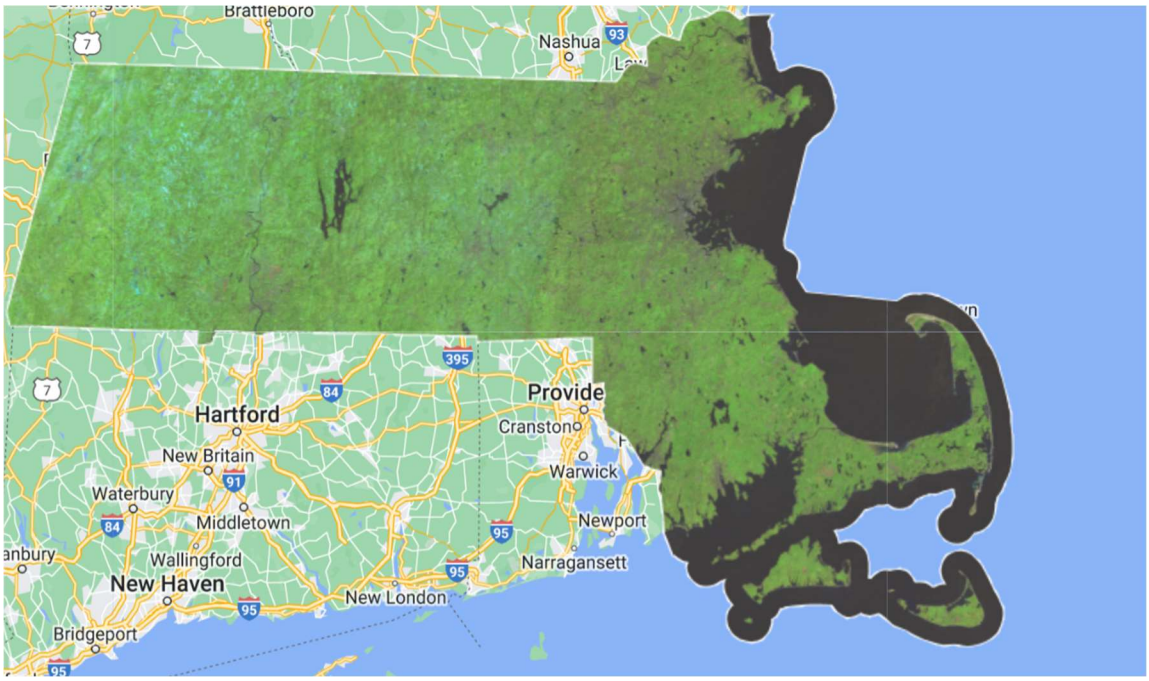
Ans: This dataset contains atmospherically corrected surface reflectance and land surface temperature derived from the data produced by the Landsat 8 OLI/TIRS sensors. Image Resolution is 30 meters. These images contain 5 visible and near-infrared (VNIR) bands and 2 short-wave infrared (SWIR) bands processed to orthorectified surface reflectance, and one thermal infrared (TIR) band processed to orthorectified surface temperature. The min and max value of this image is 1 and 65455.

b) What is this color composite called?

Ans: False Color Composite.

c) What features can you identify in this image?

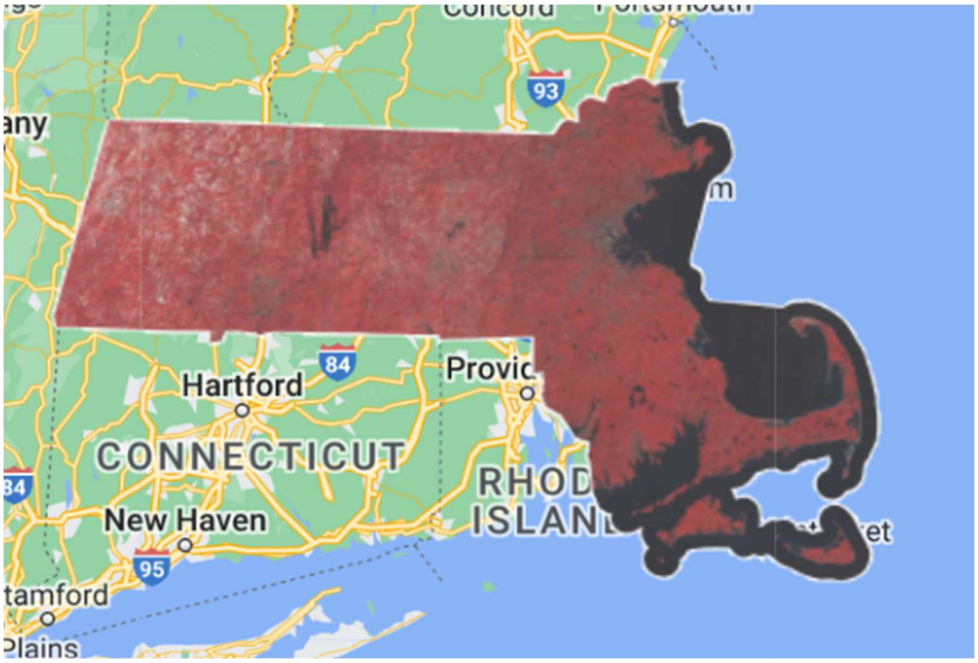
Ans:



Features of the Image: The major features of this image are Water bodies like rivers, lakes and part of ocean, urban settlement, major roads, highways, and vegetations.

d) Modify your code to create and display a NIR, Red, Green false color composite for a state of your choice. Save a screenshot of this image for the report.

Ans:



Part-2

Link: https://code.earthengine.google.com/4fc7f94f1986c1cdd5696ee609082078

e) Create a screenshot of the image for your report.

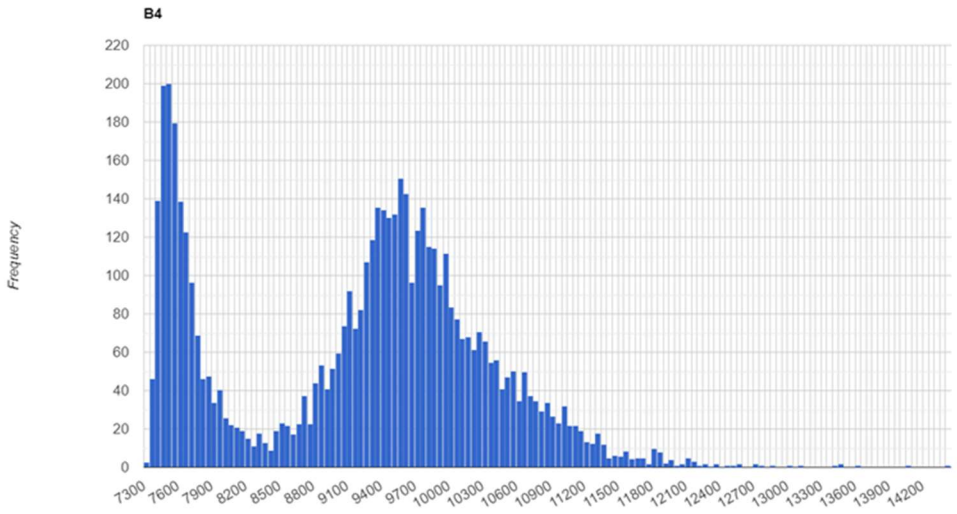
Ans:



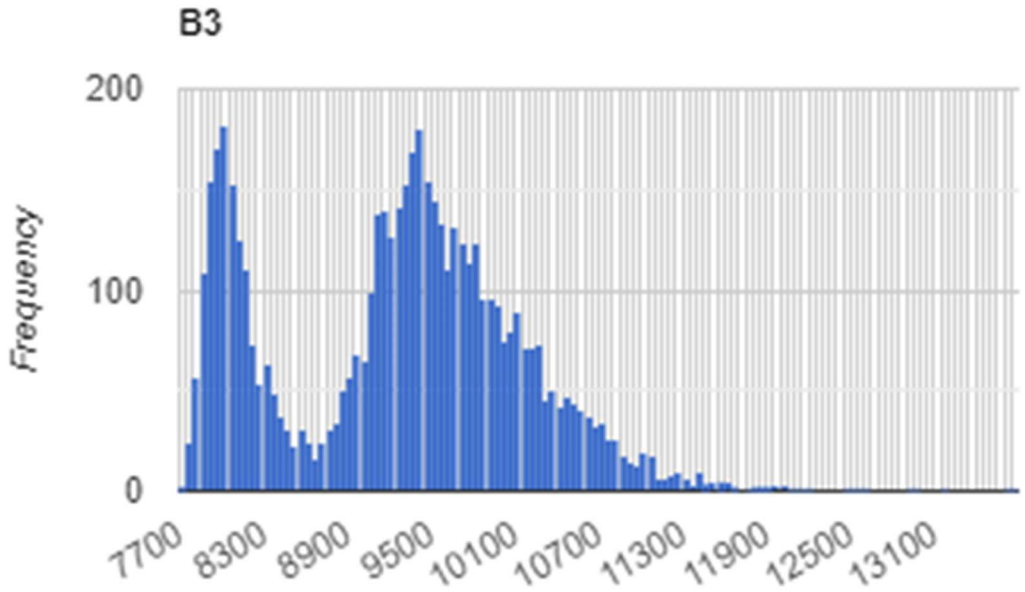
f) Paste all histograms in the report

Ans:

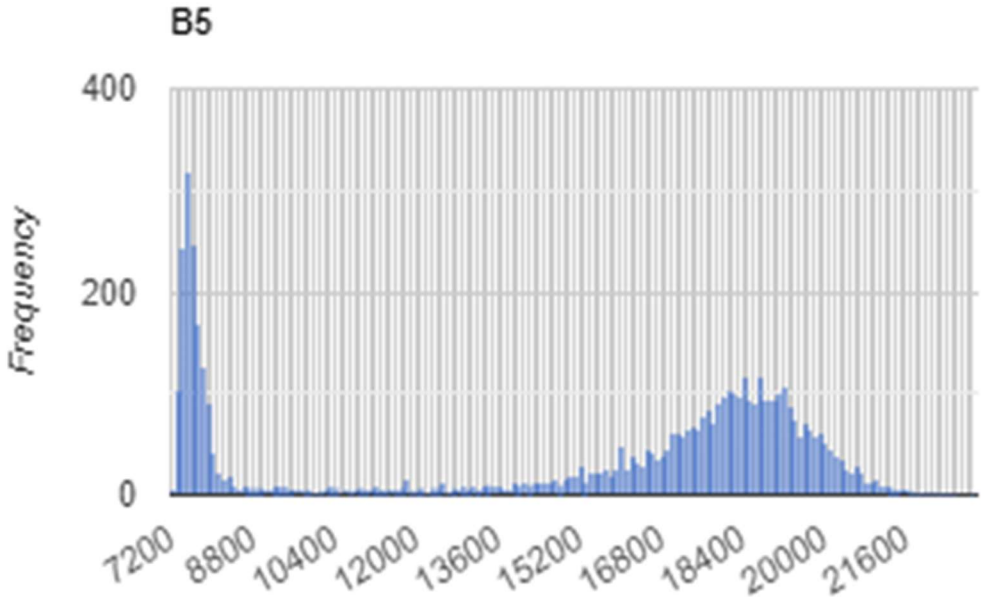
Histogram Band 4



Histogram Band 3



Histogram Band 5



g) Interpret the histogram, is it unimodal or bimodal?

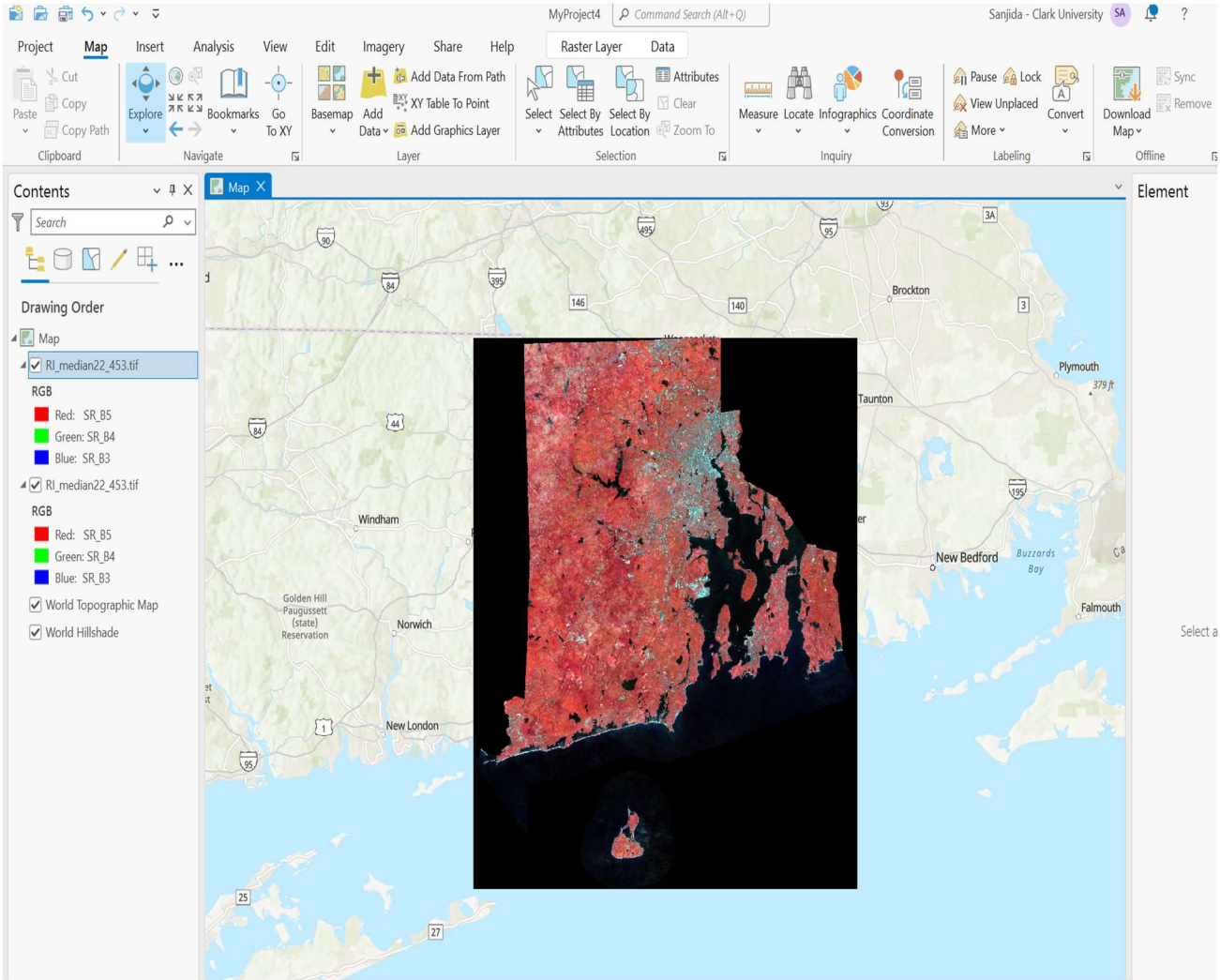
Ans: All three histograms are bimodal because they have two peaks.

h) What landscape characteristics (e.g. land cover) give the histogram this shape?

Ans: The band 3 and 4 histograms present high frequency in low pixel values which might be the presentation of water and also show the high frequency in the high pixel values which might be the representation of vegetation, soil, and baren lands.

On the other hand, band 5 histogram shows higher frequency in lower pixel values which might be the large area of water bodies and sea port and also shows higher frequency in high pixel values which is the representation dense and healthy forest cover.

Part-3




FINISH