# Análisis de le temperatura de Santa Marta

## Lee los datos en Disco y genera el archivo con el promedio de datos.

## Bibliotecas utilizadas

import rasterio as r  
import geopandas as gpd  
import os  
import fiona as f   
from rasterio.plot import show  
from rasterio.plot import show\_hist  
from rasterio.mask import mask  
from shapely.geometry import box  
from fiona.crs import from\_epsg  
import pycrs   
from multiprocessing import cpu\_count  
  
cpu\_count()

16

## Cargando la zona de estudio

dir\_list = "C:\\Users\\User\\Downloads\\TemperaturaZonaEstudio\\"  
print(dir\_list)

C:\Users\User\Downloads\TemperaturaZonaEstudio\

def FindDirectoryToRead():   
 listDirectory=[]   
 for root, dirs, files in os.walk(dir\_list):  
 for dir in dirs:  
 listDirectory.append(dir)  
 return listDirectory  
  
print(FindDirectoryToRead())

['1983', '1984']

## Leyendo Imágenes por Año

def readRasterDirectory(year):  
 path=dir\_list+"\\"+year+"\\"  
   
 sum=0  
 for root, dirs, files in os.walk(path):  
 for f in files:   
 print(f)   
 raster = r.open(path+f)  
 value1=raster.read(1)[1175,2115]  
 #print(value1)   
 value2=raster.read(1)[1175,2116]  
 #print(value2)  
 sum=value1+value2  
 #print("Suma:"+str(sum))  
 #show((raster, 1), cmap='terrain')  
 average=sum/2  
 print("Promedio:"+str(average))

from concurrent.futures import ThreadPoolExecutor  
executor = ThreadPoolExecutor(max\_workers=2)  
a = executor.submit(readRasterDirectory('1986'))   
print(a)

b = executor.submit(readRasterDirectory('1984'))  
print(b)