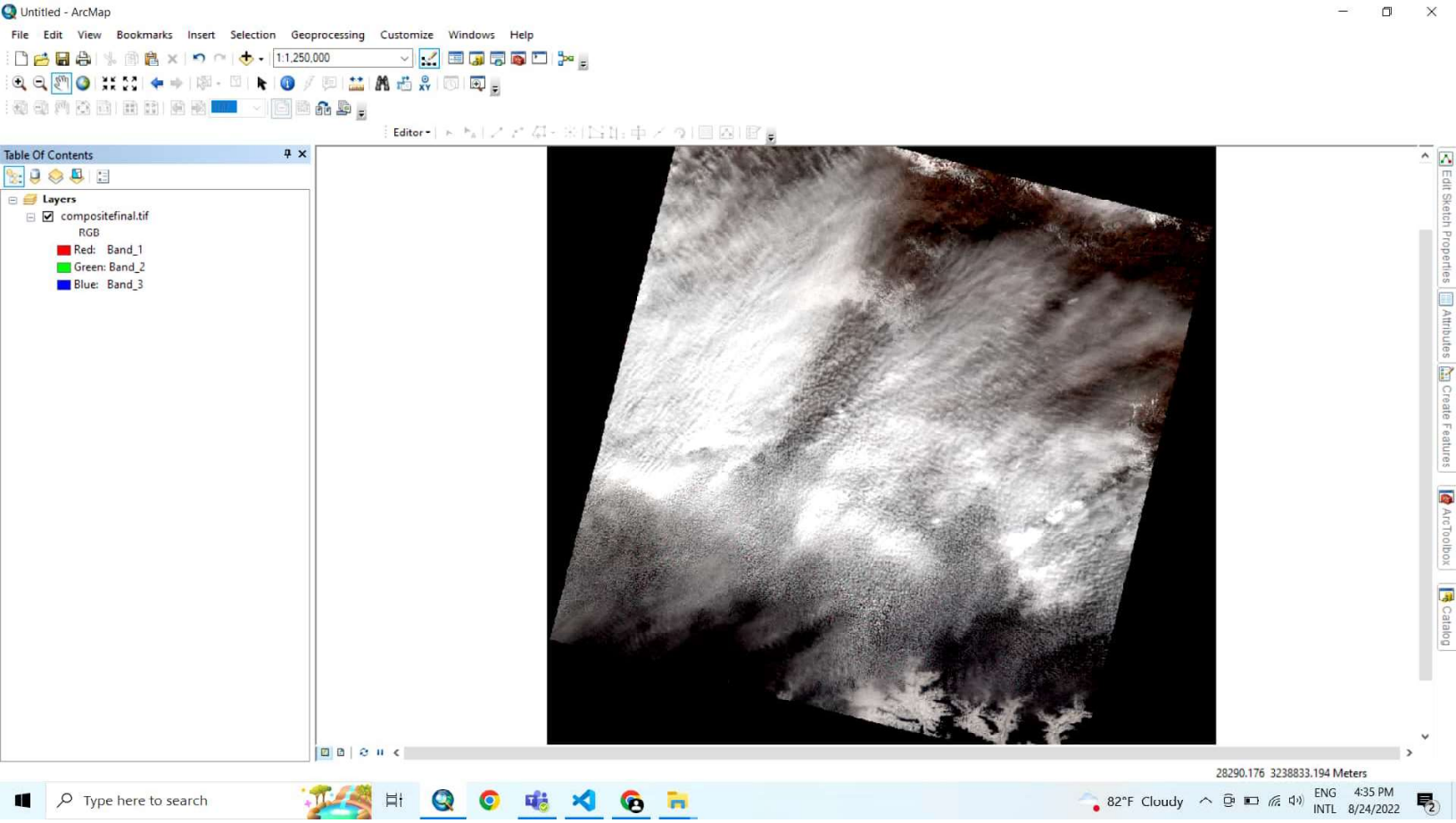

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mosiac_final.ipynb

C: > Users > DELL > Desktop > mosiac_final.ipynb > Mosaicing the images > from osgeo import gdal

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Mosaicing the images

```
from osgeo import gdal
```

[47] ✓ 0.2s Python

```
import os
os.chdir(r'E:\PYTHON-ASSIGNMENT\'mosaic')
```

[48] ✓ 0.9s Python

```
file_names = ['ASTGTMV003_S21E047_dem.tif','ASTGTMV003_S22E047_dem.tif','ASTGTMV003_S22E048_dem.tif','ASTGTMV003_S21E048_dem.tif']
```

[49] ✓ 0.1s Python

```
ds=gdal.Open(file_names[3])
print(ds)
```

[50] ✓ 0.1s Python

```
<osgeo.gdal.Dataset; proxy of <Swig Object of type 'GDALDatasetShadow *' at 0x000002A400BC47E0> >
```

```
# geotransform = ds.GetGeoTransform()
# originX = geotransform[0]
# originY = geotransform[3]
# OS Python week 4: Reading raster data [11]
# pixelWidth = geotransform[1]
# pixelHeight = geotransform[5]

def compute_extents(ds):
```

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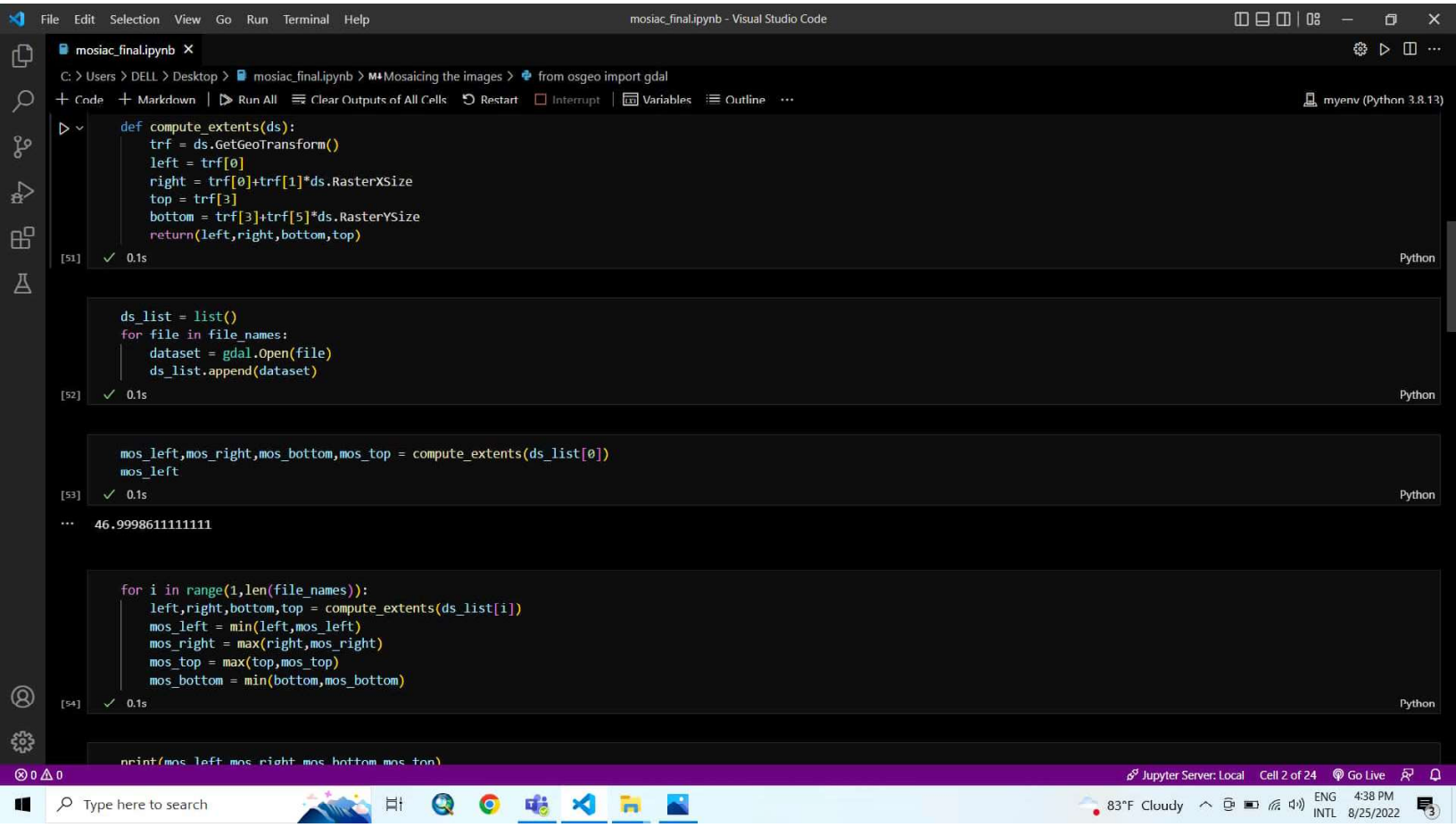

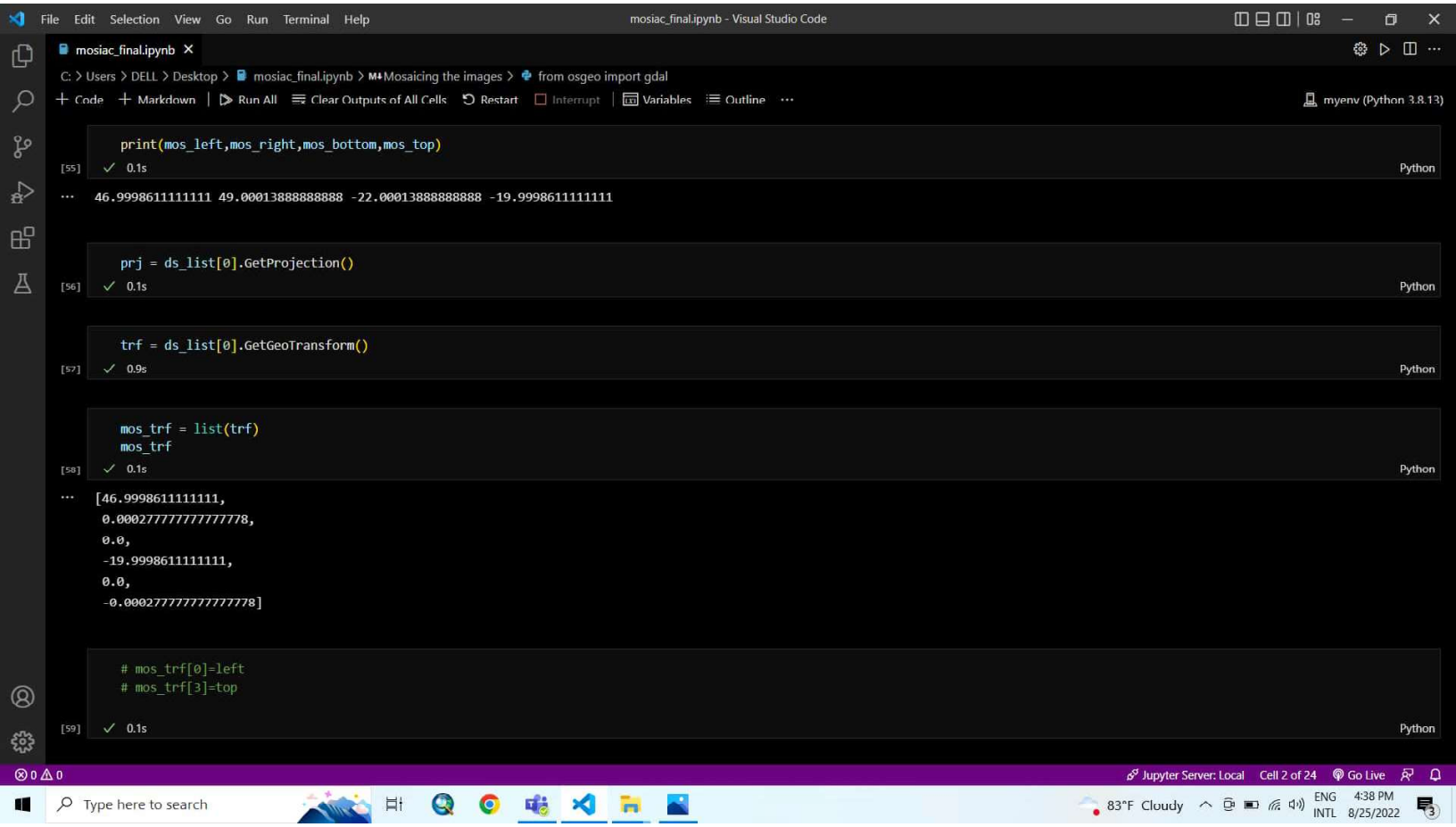

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mosiac_final.ipynb

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```
driver = gdal.GetDriverByName('GTiff')
```
[60] ✓ 0.1s Python

```
import math
```
[61] ✓ 0.1s Python

```
width = math.ceil((mos_right-mos_left)/mos_trf[1])
height = math.ceil((mos_bottom-mos_top)/mos_trf[5])
```
[62] ✓ 0.9s Python

```
out_ds = driver.Create('final_mosaiced.tiff',width,height,eType=gdal.GDT_UInt16)
out_ds.SetProjection(prj)
out_ds.SetGeoTransform(mos_trf)
```
[63] ✓ 0.1s Python

```
0
```

```
for ds in ds_list:
    trns = gdal.Transformer(ds,out_ds,[])
    suc,xyz = trns.TransformPoint(False,0,0)
    x,y,z = map(int,xyz)
    data_out = ds.GetRasterBand(1).ReadAsArray()
    out_ds.GetRasterBand(1).WriteArray(data_out,x,y)
```
[64] ✓ 1.1s Python

```
mosaic_dataset = out_ds.ReadAsArray()
```
[65] ✓ 0.1s Python

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```
out_ds.BuildOverviews('average',[2,4,8,16,32])
```

[66] ✓ 1.4s Python

```
0
```

```
import matplotlib.pyplot as plt
# plt.figure(figsize=(10,10))
plt.imshow(mosaic_dataset,clim=(50,100),cmap=
           'gray',extent=([-1, 1, -1, 1]))
```

[67] ✓ 3.9s Python

```
<matplotlib.image.AxesImage at 0x2a402517100>
```

</>

```
out_ds.FlushCache()
del ds_list
```

[68] ✓ 0.2s Python

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