

Assignment 6: Raster Data Summarization

(60 Points Total, 6 Points Each)

Data available under [Resources>UK Data](#).

The following raster layers have been provided for the entire extent of the United Kingdom. Both grids have been resampled to a 100 m cell size to reduce processing time.

[uk_lc.tif](#): land cover grid derived from the CORINE 2018 land cover product (<https://land.copernicus.eu/pan-european/corine-land-cover/clc2018>)

[uk_dem100m.tif](#): digital elevation model with units in meters (<https://www.eea.europa.eu/data-and-maps/data/copernicus-land-monitoring-service-eu-dem>)

The provided [uk_data.gpkg](#) GeoPackage contains the United Kingdom district boundaries (from the United Kingdom Data Service) and point locations of major cities (from Natural Earth).

[district_bound](#): all districts in the United Kingdom

[places](#): major cities

Using raster summarization techniques to answer the following questions. The [district](#) name is provided in the “name” field, and the [city](#) name is provided in the “NAME” field.

Questions

1. Which [city](#) has the [highest](#) reported [elevation](#)?
2. Which [city](#) has the [lowest](#) [elevation](#)?
3. What is the [mean](#) [elevation](#) of all the [cities](#)?
4. Which [district](#) has the [highest mean elevation](#)?
5. Which [district](#) has the [lowest mean elevation](#)?
6. What is the [range](#) of mean [elevations](#) for all the [districts](#)?
7. Which [district](#) has the [largest percentage](#) of its area classified as peat bogs [land cover](#) (Code 36)?
8. Which [district](#) has the [largest percentage](#) of its area classified as moors and heathland [land cover](#) (Code 27)?
9. Which [district](#) has the [largest percentage](#) of its land area classified as continuous urban fabric or discontinuous urban fabric [land cover](#) (Codes 1 and 2)?
10. What is the [average/mean percentage](#) of continuous urban fabric or discontinuous urban fabric (Codes 1 and 2) for all the [districts](#)?

Deliverables

- Answers to the 10 questions.