

Para_loss.py

1. *Import necessary packages and configure settings*
2. *Define event-specific parameters, such as the event ID, base folder, shapefile path, and the Calculations.xlsx file*
3. *Module 1: Download ESRI Raster Data from USGS:*
 - *Create a download folder for ESRI raster files*
 - *Configure a headless Chrome driver for web scraping*
 - *Visit webpage containing ESRI raster files for the specified earthquake event*
 - *Download the ESRI raster files, unzip them, and save them to the download folder*
4. *Module 2: Load Shakemap MMI Raster Data:*
 - *Load the ShakeMap MMI data as a raster layer*
 - *Set the coordinate system*
 - *Add the MMI layer to the project*
 - *Export the MMI layer as a GeoTIFF file*
5. *Module 3: Load and Add Communes Shapefiles as Vector Layer:*
 - *Load the Communes shapefile as a vector layer*
 - *Set the coordinate system as WGS 84*
 - *Write the Communes layer to a new shapefile in WGS 84 system*
6. *Module 4: Run Zonal Statistics:*
 - *Calculate zonal statistics (max MMI value per commune)*
 - *Add the resulting zonal statistics layer to the project*
7. *Module 5: Save Zonal Statistics Results to a CSV File:*
 - *Export the Commune layer with zonal statistics to a CSV file*
 - *Remove the additional columns from the output CSV file (perimeter, etc.)*
8. *Module 6: Modify the Excel File:*
 - *Open the original Excel "Calculations.xlsx" file*
 - *Open the output CSV file with zonal statistics*
 - *Copy data from the CSV file into the Excel file*
 - *Save the modified Excel workbook as a new file "Modified_Calculations.xlsx"*
9. *Exit the QGIS application*