Cloud Masks

1. Information about Sentinel-2 bands, resolutions and purpose
   1. <https://gdal.org/drivers/raster/sentinel2.html>

A screenshot of a cell phone

Description automatically generated

1. Sentinel Hub's cloud detector for Sentinel-2 imagery
   1. [s2cloudless](https://github.com/sentinel-hub/sentinel2-cloud-detector) by Sentinel Hub
      1. Cloud Detector Python package takes Sentinel-2 images and uses bands **[B01, B02, B04, B05, B08, B8A, B09, B10, B11, B12]**.
         1. <https://github.com/sentinel-hub/sentinel2-cloud-detector>
      2. Dependencies (pip install):
         1. **pip install s2cloudless**
            1. Uses LightGBM as dependency, install this too! (<https://lightgbm.readthedocs.io/en/latest/Installation-Guide.html>)
      3. An example of cloud classification and cloud masking from their service (but we only need the masking part)
         1. <https://github.com/sentinel-hub/sentinel2-cloud-detector/blob/master/examples/sentinel2-cloud-detector-example.ipynb>
         2. Tried to get it to work, but seems to work best when getting data directly from servers
            1. Need to format our image files into multidimensional numpy array of dimensions (n\_images x n x m x bands)
2. A tool for converting ESRI (proprietary format) to GeoJSON (usable for us)
   1. pyesridump
      1. <https://github.com/openaddresses/pyesridump>