

Plateforme_lidar

Installation :

1. Install plateforme_lidar module :

add plateforme_lidar directory path to PYTHONPATH

2. Install required modules :

```
pip install -r .\plateforme_lidar\requirements.txt
```

3. Useful software :

- Make sure that you have downloaded CloudCompare to use plateforme_lidar.cloudcompare.py
Add path to cloudcompare.exe in plateforme_lidar.utils.py (dictionary QUERY_0)
Add path to PoissonSurfaceReconstruction.exe to use it in plateforme_lidar.utils.py (dictionary QUERY_0)
See more : <http://www.cloudcompare.org/>
- Make sure that you have downloaded OSGEO4W to use plateforme_lidar.gdal.py
Add OSGEO4W in your environment variable
See more : <https://trac.osgeo.org/osgeo4w/>

Basic Usage

Reading / Writing LAS file :

```
>>> from plateforme_lidar import pl
>>> workspace="D:/yourDirectory/"
>>> dataset = pl.lastools.readLAS(workspace+"inFile.laz")
>>> intensity = dataset.intensity
>>> numberOfPoints=len(data)
...
>>> addFieldList=[{"name":"addField1","type":"float32","data":extraField1},
{"name":"addField2","type":"uint8","data":extraField2}]
>>> pl.lastools.writeLAS(workspace+"outFile.laz",dataset,extraFields=addFieldList)
```

Reading, viewing and filtering fwf LAS file :

```
>>> from plateforme_lidar import pl
>>> workspace="D:/yourDirectory/"
>>> dataset = lastools.readLAS(workspace+"inFile_fwf.laz")
>>> waveforms = lastools.readWDP(workspace+"inFile_fwf.laz",dataset)
>>> indexPoint=99
>>>
pl.lasfwf.viewerFWF(pl.lastools.Filter_LAS(dataset,indexPoint),waveforms[indexPoin
```

```
t])  
>>> listPoints=[12,102,30]  
>>> dataExtract=pl.lastools.Filter_LAS(dataset,listPoints)  
>>> waveExtract=pl.lastools.Filter_WDP(waveforms,listPoints)  
>>> pl.lastools.Update_ByteOffset(dataExtract,waveExtract)  
>>> pl.lastools.writeLAS(workspace+"outFile_fwf.laz",  
dataExtract,format_id=4,waveforms=waveExtract)
```