Code documentation

Dataset

The dataset is from Amazon web services, the link for the dataset is https://registry.opendata.aws/usgs-lidar/. Here we have to find a way to fetch the data and use it for processing.

A python class is used for fetching data from AWS using **boto3,** the AWS SDK for Python. Boto3 makes it easy to integrate our Python application, library, or script with AWS services including Amazon S3, Amazon EC2, Amazon DynamoDB, and more.

Organizing, storing and retrieving data in Amazon S3 focuses on two main things — buckets and objects(file) that work together to create your storage system.

In the code api.py I used **usgs-lidar-public** as a bucket and an **AK_BrooksCamp_2012** file or object. And running the code downloaded the **AK_BrooksCamp_2012** file for processing. You can find other files in the filename.txt .

And it shows that we can retrieve any data from the AWS and also download files using python code and boto3 SDK.

The file AK_BrooksCamp_2012 contains las, json and js files. And the total size is around 2.1GB.

Coordinate system

There are numerous conventions used globally for representing the coordinate system for map data

1 PROJ4- http://projg.org/usage/projections.html

2 OGC WKT(de facto standard)

3 EPSG codes(easy to use)

4 XML etc