Dataset obtained from http://kilauealidar.com/ which offered the following metadata about the dataset. Please refer to http://kilauealidar.com/ for additional information.

Processing

Initial data reduction and processing of the raw LiDAR data was conducted in the field by QSI. The initial georegistered flight line point clouds were delivered to the Cold Regions Research and Engineering Lab (CRREL - David Finnegan/Adam LeWinter) for follow on processing via PDAL using a CRREL Amazon cloud instance developed by Hobu Inc under contract to CRREL.

Details

All processing done with PDAL 1.7.2 and GDAL 2.2.0

- Creation of 1km Tiles from flightlines. All flightlines were read to create a large virtual dataset and then filters.splitter was used to create 1km tiles.
- Bare earth and noise processing. PDAL filters.outlier in default statistical mode was used to mark points as noise (Classification 7) and then non noise points were passed to filters.smrf (using defaults) and used to mark ground points using Classification 2.
- Tiles were filtered on Classification 2 points and passed to the gdal writer using IDW (inverse distance weighting) to create DTMs with 1/2 m cell sizes
- All DTM tiles were merged to 1 geotiff using GDAL 2.2 and written in compressed (LZW) and uncompressed format using Cloud Optimized GeoTIFF (COG) structure. A hillshade in compressed (LZW) and uncompressed was also made.
- All DTM tiles were then processed using `gdal_fillnodata.py` to create filled DTMs. These were then merged in a similar fashion as in step 4.
- Coordinate system was set to `EPSG:6635+5703`

Metadata

Coordinate system information

Aerial data

`NAD83 UTM 5N, NAVD88 Geoid 09`

TLS data

`NAD83(PA11) UTM 5N`