

# Package ‘dsmSearch’

April 8, 2024

**Type** Package

**Title** DSM and LiDAR downloader

**Version** 1.0.1

**Description** A collection of functions to search and download DSM (Digital Surface Model) and LiDAR (Light Detection and Ranging) data via APIs, including 'OpenTopography' <<https://portal.opentopography.org/apidocs/>> and 'TNMAccess' <<https://apps.nationalmap.gov/tmaccess/#/>>.

**Depends** R (>= 4.1)

**License** GPL-3

**Encoding** UTF-8

**RoxygenNote** 7.3.1

**Language** en\_GB

**Suggests** testthat (>= 3.0.0), knitr, rmarkdown

**VignetteBuilder** knitr, rmarkdown

**Imports** dplyr, sf, sp, terra, lidR, httr2, imager

**NeedsCompilation** no

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**Repository** CRAN

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get_lidar	<i>get_lidar</i>
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### Description

Search for and download LiDAR data based on coordinates of a spatial point with a given distance or a bounding box. The maximum distance is 1000m. Different dataset could be found and the function automatically downloads the latest dataset. To get more details of data on a larger scale, please use `viewscape::lidar_search`.

### Usage

```
get_lidar(x, y, r, epsg, bbox, max_return = 500, folder)
```

### Arguments

<code>x</code>	numeric, indicating Longitude degree of the center point.
<code>y</code>	numeric, indicating latitude degree of the center point.
<code>r</code>	numeric, indicating search distance for LiDAR data. The maximum distance is 1000m (3281ft). If <code>r &gt; 1000m</code> , it will be reset to 1000m.
<code>epsg</code>	numeric, the EPSG code specifying the coordinate reference system.
<code>bbox</code>	vector, a bounding box defining the geographical area for downloading data.
<code>max_return</code>	numeric, indicating the maximum of returns.
<code>folder</code>	string (optional), indicating a path for downloading the LiDAR data

### Value

lidR LAS object.

### References

Jean-Romain Roussel and David Auty (2022). Airborne LiDAR Data Manipulation and Visualization for Forestry Applications. R package version 4.0.1. <https://cran.r-project.org/package=lidR>

### See Also

[lidar\\_search\(\)](#)

### Examples

```
las <- dsmSearch::get_lidar(x = -83.741289, y = 42.270146, r = 1000, epsg = 2253)
las <- dsmSearch::get_lidar(bbox = c(-83.742282, 42.273389, -83.733442, 42.278724), epsg = 2253)
terra::plot(lidR::rasterize_canopy(las, 10, lidR::dsmtin()))
```



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