

# Package: dsmSearch (via r-universe)

August 28, 2024

**Type** Package

**Title** DSM and LiDAR downloader

**Version** 1.0.0

**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/>](https://portal.opentopography.org/apidocs/) and 'TNMAccess' [<https://apps.nationalmap.gov/tnmaccess/#/>](https://apps.nationalmap.gov/tnmaccess/#/).

**Depends** R (>= 4.1)

**License** GPL-3

**Encoding** UTF-8

**Roxygen** list(markdown = TRUE)

**RoxygenNote** 7.3.1

**Language** en\_GB

**LazyData** true

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

**VignetteBuilder** knitr, rmarkdown

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

**Repository** <https://billbillbilly.r-universe.dev>

**RemoteUrl** <https://github.com/billbillbilly/dsmsearch>

**RemoteRef** HEAD

**RemoteSha** bc153aded71e030ec076ba8538d7a8ad4b61072

## Contents

get_dsm_30 . . . . .	2
get_lidar . . . . .	3
lidar_search . . . . .	4

<b>Index</b>	<b>5</b>
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get\_lidar                      *get\_lidar*

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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

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

```
## Not run:
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()))

## End(Not run)
```



# Index

`get_dsm_30`, 2  
`get_lidar`, 3

`lidar_search`, 4  
`lidar_search()`, 3