

SpaceLiDAR.jl

Processing ICESat-2 & GEDI
satellite LiDAR data



PRESENTER

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BACKGROUND

Current global remote-sensing methods can't measure terrain when obscured by canopy or infrastructure. Using lasers (LiDAR) is the solution but is local and expensive. However, recent satellites missions such as ICESat-2 and GEDI enable global LiDAR terrain measurements. This package allows you to work with these datasets.

FUNCTIONALITY

- GEDI L2A
- ICESat-2 ATL03, ATL08
- Find and download granules (using NASA Earthdata Search)
- Extract point information and attributes for filtering
- Save to GeoPackage or .las/laz

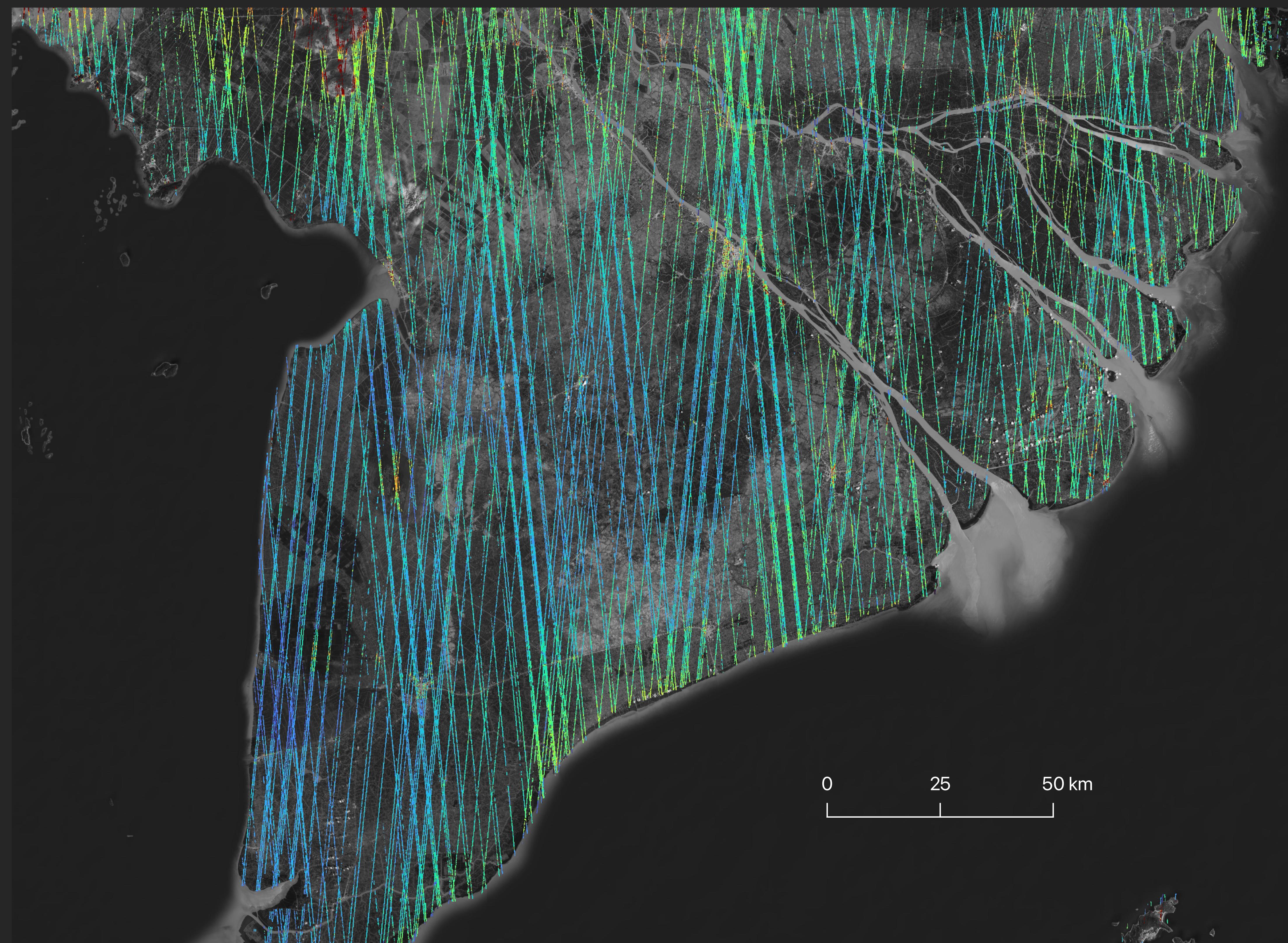
LINKS



evetion.nl/SpaceLiDAR.jl
github.com/evetion

scan for documentation

Use SpaceLiDAR.jl to find, download and convert ICESat-2 and GEDI data to create better global digital terrain models



NEXT UP

We're actively developing SpaceLiDAR and will add tools for interpolation and fusion with existing digital elevation models.

USED IN

Vernimmen, Ronald, Aljosja Hooijer, and Maarten Pronk. 2020. 'New ICESat-2 Satellite LiDAR Data Allow First Global Lowland DTM Suitable for Accurate Coastal Flood Risk Assessment'. *Remote Sensing* 12 (17): 2827.

<https://doi.org/10/gg9dg6>.

SEE ALSO

GeoDataFrames.jl
LazIO.jl

ArchGDAL.jl

ICESat-2

icesat-2.gsfc.nasa.gov

GEDI

gedi.umd.edu

Thanks to @visr, @yeesian for their JuliaGeo and GDAL contributions and especially NASA for providing these datasets.

Deltares