Final Project - GIS

Thomas Beier, Florian Franz, Konstantin Seeger

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Using the `lidr` package by J.-R. Roussel for processing LiDAR data and creating a forest microclimate model.

For information see the book (https://r-lidar.github.io/lidRbook/index.html), the package documentation (https://cran.r-project.org/web/packages/lidR/index.html) and also this publication (https://www.sciencedirect.com/science/article/pii/S0034425720304314).

Read las file

```
las_files <- list.files(envrmt$path_raw,
                        pattern = glob2rx("*.las"),
                        full.names = TRUE)

las <- readLAS(las_files[1])

# Assign a coord. ref. syst. (CRS)
# In this case UTM zone 32N
epsg_number <- 25832
crs(las) <- epsg_number

las
```

```
## class        : LAS (v1.3 format 1)
## memory       : 2 Gb
## extent       : 477500, 478217.5, 5631730, 5632500 (xmin, xmax, ymin, ymax)
## coord. ref.  : ETRS89 / UTM zone 32N
## area         : 0.55 km²
## points       : 26.35 million points
## density      : 47.7 points/m²
```

Create a canopy height model (CHM)

```
#
```