

pyplyslice

Helper Utilities for Slicing PLY Objects at Specific Height(s)

Installation

This project utilizes [poetry](#) for dependency & environment management. Clone or download this repository to your local machine and create a new environment:

```
$ cd <project_dir>
$ poetry install
```

Though it's recommended to utilize poetry, the project may also be installed via pip:

```
$ cd <project_dir>
$ pip install .
```

Usage

Once installed, the pyplyslice CLI can be invoked directly from the command line:

```
$ pyplyslice <inputs go here>
```

The pyplyslice CLI can also be invoked from the root of this repository using Python:

```
$ python ./pyplyslice/ui.py <inputs go here>
```

For all processing pipelines, slice heights are calculated from the PLY file's associated *.txt file containing the scan's landmark coordinates. The landmarks file is assumed to have the same stem as the PLY file. Association of landmarks file to PLY file is case sensitive. If a landmarks file cannot be found, the PLY is skipped.

Landmark *.txt files are assumed to be space delimited rows (name x y z) with 1 header line.

Helper Jupyter Notebooks are also provided in the root of the repository to handle basic tasks.

pyplyslice single

Slice the provided scan file and output to CSV.

Input Parameters

Parameter	Description	Type	Default
--scan-filepath	Path to PLY file to slice	String	GUI Prompt

pyplyslice batch

Batch process all scans in the specified directory and output to CSVs.

Input Parameters

Parameter	Description	Type	Default
--scan-dir	Path to directory of PLY files to slice	String	GUI Prompt
--recurse / --no-recurse	Recurse through child directories & process all PLY files ¹	Bool	False

Notes:

1. When a directory of scans is provided for scaling, to simplify path case-sensitivity considerations for discovery of scan files on operating systems that are not Windows, file extensions are assumed to always be lowercase (e.g. .ply).

Examples

```
$ pyplyslice batch --scan-dir "./sample_dir"
# <snip>
Processing Complete ... Sliced 82 of 82 PLY files
```

```
$ pyplyslice single --scan-filepath "./sample_dir/some_scan12345-PX-123.edt.123k"
Slicing complete ... sliced 'some_scan12345-PX-123.edt.123k' at Z' = 25.600
```

