Projection

Module `bbox`

Classes

Class `BoundingBox`

```
class BoundingBox
```

Container for bounding boxes

Class variables

Variable `loc` Type: `vec3.vec3`

Location of the bounding box from the center of the vehicle

Variable `pose` Type: `numpy.ndarray`

Pose of the vehicle

Variable `size` Type: `vec3.vec3`

Size of the bounding box

Methods

Method `get_point_world_RH`

```
def get_point_world_RH(
    self
) -> List[vec3.vec3]
```

Returns the points of the bounding box in world coordinates (righ hand, normalised after transformation).

$$\begin{bmatrix} x_{world} \\ y_{world} \\ z_{world} \\ 1 \end{bmatrix} = {}^{W}T_{V} \cdot \begin{bmatrix} x_{vehicle} \\ y_{vehicle} \\ z_{vehicle} \\ 1 \end{bmatrix}$$

Points are normalized into a vec3 object.

Returns

List[vec3] List of points of the bounding box

Method `get_points`

```
def get_points(
    self
) -> List[vec3.vec3]
```

Returns the points of the bounding box

Returns

List[vec3] List of points of the bounding box
