
python-saisd Documentation

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python-sailsd is a python library to make interacting with the sailsd API easy.

To install:

```
$ pip install python-sailsd
```

Brief API overview

```
class sailsd.Sailsd(host='localhost',port=3333)
```

```
request (*attributes)
```

Request one or more attribute from sailsd. These should be the names of each attribute as a string, for example:

```
>>> sailsd.request('speed')
{'speed': 4.59422737529291}
>>> sailsd.request('heading', 'latitude')
{'heading': 0.7459227808181, 'latitude': 0.004578511779640}
```

```
set (**kwargs)
```

Set attributes in sailsd.

```
>>> sailsd.set(rudder_angle=0.2)
{}
>>> sailsd.set(latitude=0)
{}
```

The attributes you are likely to be able to set are:

- latitude
- longitude
- sail-angle
- heading
- rudder-angle
- wind-speed
- wind-angle

but there could be others.

class sailsd.**Boat** (*sailsd=None, auto_update=False*)

A merry sailing boat sailing on the seas.

Parameters

- **sailsd** – an instance of sailsd.Sailsd to use instead of creating a new instance
- **auto_update** (*bool*) – whether to automatically request updated values on each attribute request. Setting this to True makes using `update()` redundant.

Some example usage:

```
>>> boat = sailsd.Boat()
>>> boat.rudder_angle = 0.1
>>> boat.update()
>>> boat.heading
0.758290214606183
>>> boat.speed
4.6089232392605135
>>> boat.latitude, boat.longitude
(0.0009904288095353697, 0.0009966210180718897)
```

heading

Current heading of the boat, measured in radians from the bow

latitude

Current latitude of the boat

longitude

Current longitude of the boat

rudder_angle

Angle of the rudder, measured in radians where 0 is a straight rudder

sail_angle

Angle of the sail, measured in radians where 0 is the sail pulled to the exact center of the boat

sheet_length

length of the sheet, between 0 and 1

speed

Current speed of the boat, measured in meters per second

update()

Read attributes from sailsd and update all values. For example:

```
>>> boat = sailsd.Boat()
>>> boat.update()
>>> boat.latitude
100.00292426652119
```

This should be run just before reading values to ensure they are up to date.

x

Longitude approximately projected to an x y meter grid

y

Latitude approximately projected to an x y meter grid

class sailsd.**Wind** (*sailsd=None, auto_update=False*)

Some wind wafting over the sea.

Parameters

- **sailsd** – an instance of `sailsd.Sailsd` to use instead of creating a new instance
- **auto_update** (*bool*) – whether to automatically request updated values on each attribute request. Setting this to `True` makes using `update()` redundant.

angle

Angle of wind direction in radians. A value of 0 is a movement of wind from north to south.

speed

Speed of wind in meters per second.

update()

Read attributes from `sailsd` and update values. For example:

```
>>> wind = sailsd.Wind()
>>> wind.update()
>>> wind.speed
4.0
>>> wind.angle
1.5707963267948966
```


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