# samply Documentation

Release latest

Mar 06, 2019

### Contents

1	Installation	3
2	Usage	5
3	License	7
4	Indices and tables	9

Space-filling Design Library

### Installation

#### A preliminary version is available on PyPI:

pip install samply

#### Otherwise, you can download the repository for the most cutting edge additions:

git clone https://github.com/maljovec/samply.git
cd samply
python setup.py [build|develop|install]

### Usage

You can use the library from python such as the examples below:

```
import samply
direction_samples = samply.directional.uniform(10000, 2)
ball_samples = samply.ball.uniform(10000, 2)
scvt_samples = samply.directional.cvt(10000, 2)
cvt_samples = samply.hypercube.cvt(10000, 2)
projection_samples = samply.subspace.grassmannian(10000, 3, 2)
```

The  $\star$  samples variables will be NxD matrices where N is the number of samples requested and D is the dimensionality of the sampler or the requested dimensionality.

#### License

#### **BSD 3-Clause License**

Copyright (c) 2018, Dan Maljovec All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, IN-CIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSI-NESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CON-TRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAM-AGE.

Indices and tables

- genindex
- modindex
- search