

---

# **torchcluster Documentation**

***Release [0.1.3]***

**Zhang Zhi**

**Mar 18, 2019**



---

## Contents:

---

<b>1</b>	<b>Indices and tables</b>	<b>3</b>
----------	---------------------------	----------



---

```
class torchcluster.dataset.SimpleDataset (n_clusters,      device='cpu',      feature=10,
                                         sigma=10)
```

We use this as a simple dataset to test clustering algorithm.

Simple dataset factory's config.

**Args:** *n\_clusters* (int) - How many clusters in result.

**Kwargs:** *device* (string) - Device of tensors.

*feature* (int) - The dim of each data point.

*sigma* (float) - Factor of clustering difficulty, the bigger the easier.

```
__call__ (n)
```

Generate dataset.

**Args:** *n* (int) - the number of data point.

```
class torchcluster.zoo.KMeans (n_clusters, tol=0.0001)
```

K-Means algorithm

Spectrum clustering factory's config.

**Args:** *n\_clusters* (int) - How many clusters in result.

**Kwargs:** *tol* (float) - stop to update when shift is smaller than *tol*

```
__call__ (x)
```

Clustering.

**Args:** *x* (Tensor) - Data points of number *n* by feature dim *m*.

```
class torchcluster.zoo.SpectrumClustering (n_clusters=None, cluster=None, threshold=2,
                                           k=2, eps=1e-05)
```

Spectrum clustering algorithm.

Spectrum clustering factory's config.

**Kwargs:** *n\_clusters* (int) - how many clusters in result. You do not need it if giving a cluster

*cluster* (Cluster) - clustering method after spectrum transformation

*threshold* (int) - threshold of dropping out an edge

*k* (int) - the number of selected feature

*eps* (float) – a value added to the denominator for numerical stability.

```
__call__ (x)
```

Clustering.

**Args:** *x* (Tensor) - Data points of number *n* by feature dim *m*.



# CHAPTER 1

---

## Indices and tables

---

- `genindex`
- `search`





## Symbols

`__call__()` (torchcluster.dataset.SimpleDataset method), 1  
`__call__()` (torchcluster.zoo.KMeans method), 1  
`__call__()` (torchcluster.zoo.SpectrumClustering method), 1

## K

KMeans (class in torchcluster.zoo), 1

## S

SimpleDataset (class in torchcluster.dataset), 1  
SpectrumClustering (class in torchcluster.zoo), 1