

# sklearn.cluster.KMeans

```
class sklearn.cluster.KMeans(n_clusters=8, *, init='k-means++', n_init=10, max_iter=300, tol=0.0001, verbose=0, random_state=None, copy_x=True, algorithm='lloyd')
```

[\[source\]](#)

K-Means clustering.

Read more in the [User Guide](#).

## Parameters:

**n\_clusters** : *int*, **default=8**

The number of clusters to form as well as the number of centroids to generate.

**init** : {'k-means++', 'random'}, callable or array-like of shape (n\_clusters, n\_features), **default='k-means++'**

Method for initialization:

'k-means++' : selects initial cluster centers for k-mean clustering in a smart way to speed up convergence. See section Notes in k\_init for more details.

'random': choose `n_clusters` observations (rows) at random from data for the initial centroids.

If an array is passed, it should be of shape (n\_clusters, n\_features) and gives the initial centers.



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