

# Machine Learning / Initialize Model / Clustering

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## What is Clustering?

Clustering algorithms are algorithms that learn to group a set of items together based on a set of features. For example, clustering is often used in text analysis to group pieces of text that contain common words together. Clustering can be used to group unlabeled data by figuring out which data points are closest together, and then determining the centroid, or central point, of each grouping. Once the algorithm is trained, it can be used to predict which cluster an instance of data belongs to.

Wondering which algorithm you need for a task? See these topics:

- Machine learning algorithm cheat sheet for Azure ML (<https://azure.microsoft.com/en-us/documentation/articles/machine-learning-algorithm-cheat-sheet/>)

Provides a graphical decision chart to guide you through the selection process

- How to choose Azure Machine Learning algorithms for clustering, classification, or regression (<https://azure.microsoft.com/documentation/articles/machine-learning-algorithm-choice/>)

Explains in greater detail the different types of machine learning algorithms and how they're used

## List of Modules

The category for Initialize/Clustering includes the following modules:

| Module   | Description   |
|--|---|
| K-Means Clustering ( <a href="https://msdn.microsoft.com/en-us/library/azure/dn905944.aspx">https://msdn.microsoft.com/en-us/library/azure/dn905944.aspx</a> ) | Configures and initializes a K-means clustering model |

If you want to use a different clustering algorithm, or want to create your own clustering module using an R package, see these topics:

- Execute R Script (<https://msdn.microsoft.com/en-us/library/azure/dn905952.aspx>)
- Create R Model (<https://msdn.microsoft.com/en-us/library/azure/dn955435.aspx>)

## See Also

Machine Learning / Initialize Model / Regression (<https://msdn.microsoft.com/en-us/library/azure/dn905922.aspx>)

Machine Learning / Initialize Model / Classification (<https://msdn.microsoft.com/en-us/library/azure/dn905808.aspx>)

Text Analytics (<https://msdn.microsoft.com/en-us/library/azure/dn905886.aspx>)

OpenCV Library Modules (<https://msdn.microsoft.com/en-us/library/azure/dn905946.aspx>)

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