svmclassify

Classify using support vector machine (SVM)

Syntax

```
Group = svmclassify(SVMStruct,Sample)
Group = svmclassify(SVMStruct,Sample,'Showplot',true)
```

Description

Group = svmclassify(**SVMStruct,Sample**) classifies each row of the data in `Sample`, a matrix of data, using the information in a support vector machine classifier structure `SVMStruct`, created using the **svmtrain** function. Like the training data used to create `SVMStruct`, `Sample` is a matrix where each row corresponds to an observation or replicate, and each column corresponds to a feature or variable. Therefore, `Sample` must have the same number of columns as the training data. This is because the number of columns defines the number of features. `Group` indicates the group to which each row of `Sample` has been assigned.

Group = svmclassify(**SVMStruct,Sample,'Showplot',**true) plots the *Sample* data in the figure created using the `Showplot` property with the `svmtrain` function. This plot appears only when the data is two-dimensional.

Input Arguments

SVMStruct	Support vector machine classifier structure created using the **svmtrain** function.
Sample	A matrix where each row corresponds to an observation or replicate, and each column corresponds to a feature or variable. Therefore, `Sample` must have the same number of columns as the training data. This is because the number of columns defines the dimensionality of the data space.
Showplot	Describes whether to display a plot of the classification. Displays only for 2-D problems. Follow with a Boolean argument: `true` to display the plot, `false` to give no display.

Output Arguments

Group	Column vector with the same number of rows as `Sample`. Each entry (row) in `Group` represents the class of the corresponding row of `Sample`.

Examples

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Classify an Observation Using a Trained SVM Classifier.

More About

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Algorithms

- **Support Vector Machines (SVM)**

References

[1] Kecman, V., Learning and Soft Computing, MIT Press, Cambridge, MA. 2001.

[2] Suykens, J.A.K., Van Gestel, T., De Brabanter, J., De Moor, B., and Vandewalle, J., Least Squares